



## **iNetVu™ Service Manual**

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**1-877-iNetVu6**  
**[www.c-comsat.com](http://www.c-comsat.com)**  
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## NOTICE

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**FCC and INDUSTRY CANADA INFORMATION TO THE USER:**

The FCC and Industry Canada have imposed the following conditions when operating, installing and deploying iNetVu™ Mobile Earth Stations and is mandatory for all installations made within the Continental United States and Canada as well as Hawaii, Alaska, Puerto Rico, the U.S. Virgin Islands and other U.S. Territories. The FCC requires that a certified installer perform the installation. It is also strongly recommended that a qualified professional RV dealer/installer mount the system on your vehicle. These conditions are also required by C-COM for all other installed locations.

All iNetVu™ Mobile earth station installers must be C-COM Certified, and must have specifically acknowledged the requirements for iNetVu™ Mobile installations, which are as follows:

“Installation” is the physical mounting and wiring of the Satellite provider’s earth station on a vehicle or other stationary site in order to prepare for correct operation. Only Certified C-COM iNetVu installers may perform the installation and removal of an iNetVu™ Mobile system.

“Deployment” means the raising, pointing and orienting of the earth station to the communicating satellite, every time it is raised from a stowed position for use. The deployment of an iNetVu™ Mobile system must only be done by a trained installer or by a consumer using the deployment software. Installers shall install the iNetVu™ systems only in locations that are not readily accessible to children and in a manner that prevents human exposure to potential radiation hazards.

For large vehicles with roof mounts, the height of the bottom lip of the earth station when fully deployed must be at least six feet above the ground at all times, or six feet above a surrounding surface which a person may easily access.

If a roof access ladder or any other means of access to the roof is installed on the vehicle, then the ladder or access must be blocked by a suitable rope or other barrier while the earth station is deployed or in operation. The installer must provide this rope or barrier directly to the end user at the time of installation and advise the user to use it at all times when the earth station is deployed or in operation. Warning signs shall also be provided by the installer to the end user to be posted on the rope or other barrier warning all persons not to attempt to access the roof of the vehicle while the earth station is deployed or in operation.

Warning signs shall be posted at prominent locations on the earth station informing all persons of the danger of harmful radiation from the earth station while it is deployed or while in operation.

The iNetVu™ Mobile system may only be operated when the vehicle is stationary.

The installer must inform the end user that the vehicle must be stabilized during the transmission, to prevent movement of the vehicle for any reason, including movement of persons on or off the vehicle, or high winds. The installer shall advise the end user how to appropriately stabilize their vehicle.

Installers shall be liable for all damages if they fail to comply with the above mandatory conditions. This includes, but is not limited to damages caused by improper installation or due to the failure to provide required information to the end user.

Installers and end users will be deemed directly liable for any damages resulting from either of their failure to comply with the above rules. These rules are meant to ensure that extraordinary precautions and measures are used to prevent satellite interference or exposure to harmful radiation. C-COM reserves the rights to immediately **suspend without liability or previous notice** the operation of the earth station upon detection of a deviation from its installation or operational requirements until the deviation is corrected. In addition, C-COM reserves the right to suspend or cancel the Installer Certificate of any installer that has not fully complied with these installation requirements.

Further, the installer and end user may be directly liable for any damages resulting from any change undertaken by either of them. Including but not limited to, any modification of any part of the hardware, software, specific operational frequencies, the authorized satellite, or the size or other characteristics of the earth station supplied to them by C-COM or C-COM's authorized representatives.

**Note 1:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio / TV technician for help.

**Note 2:**

This Class B digital apparatus complies with Canadian ICES-003.



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## 1. INTRODUCTION

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### 1.1. About This Manual

This service manual explains how to fully maintain the iNetVu™ Mobile System, troubleshoot common errors, and repair/replace certain product components. An electronic version of this manual is included on the iNetVu™ CD that came with your system.





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## 2. MAINTENANCE

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### 2.1. Maintenance Frequency

Regular maintenance to the iNetVu™ System **must** be performed to avoid damage to equipment revolving around the automatic rotational axes.

#### 2.1.1.Regular Operating Environments

Under normal operation conditions, it is recommended to maintain your iNetVu™ Mobile Platform **every three (3) months**.

#### 2.1.2.Harsh Operating Environments

It is recommended to perform maintenance to your iNetVu™ Mobile Platform at least **every one (1) month** when subjected to snow and ice, dirt, grime, road spray, sand, salt spray, or extreme heat or cold. *Immediately perform maintenance after exposure to known chemicals, corrosives, contaminants, or before the system is prepared for storage.*

## **2.2. Maintenance Items**

Perform each of the following items as frequent as described in the previous section.

### **2.2.1.General Cleaning and Maintenance**

The iNetVu™ Antenna Systems are designed as an outdoor use product. They may be subjected to varying conditions that could include:

- Snow
- Ice
- Dirt
- Grime
- Road spray
- Salt spray
- Extreme heat or cold
- Other chemicals, contaminants, or mechanical blockages that can be harmful and damaging to the operation and finish of the iNetVu™ product.

After any exposure to contaminants or periodically after general use, the iNetVu™ outdoor product should be cleaned with warm soap and water or low pressure wash, rinsed, then dried thoroughly for the best ongoing operation, reliability, and maintenance of fit and finish.

### **2.2.2.Preparation for Storage**

Specifically before storage in a transportable case or sealing into a storage container, the system should be cleaned, thoroughly dried, then lubricated as per maintenance procedures before covering.

### 2.2.3. Cleaning iNetVu™ Mobile Platform Connectors

#### Required Materials:

- None

#### Procedure:

1. Locate the iNetVu™ Mobile Platform's Connector Plate on side the unit's base plate.

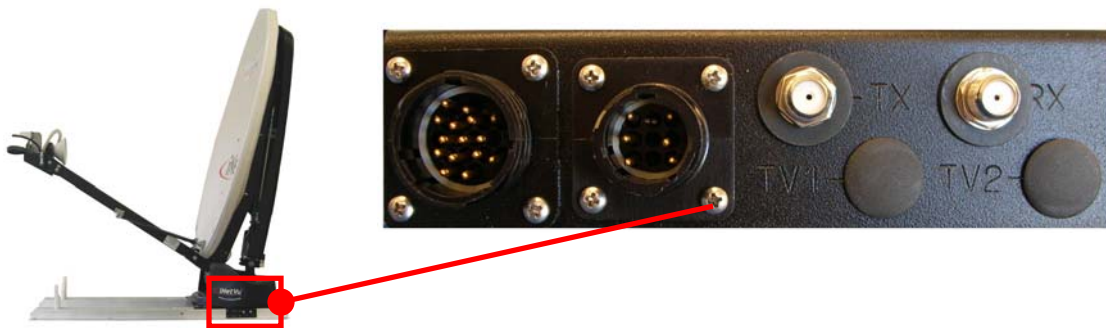


Fig. 1: iNetVu™ Mobile Platform Connector Plate Location

2. Remove any obstructions such as snow, ice, or dirt from the exterior and interior (if any) or the Motor Control, Sensor, and Coaxial Ports.

Use a can of compressed air if necessary.



Fig. 2: Connectors and Connector Plate

## 2.2.4.Spray On Grease - Application to Joints

It is highly recommended to lubricate and provide corrosion resistance to bushing, bearings, and pins to maintain high quality performance of the iNetVu™ Platform.

### **Recommended Materials:**

- Spray On - White Lithium Grease

### **Application:**

Apply white lithium grease to all shaft bearings, bushings, and pins.

- a. Bearings of Elevation Arm
- b. Bearings of Feed Arm (1.2 and 1.8 Mounts)
- c. Pins, Shafts, and Bushings located at the top and bottom of the Actuator.

## 2.2.5. Grease Application to Polarization Gear Assembly

### Required Materials:

- Phillips Screwdriver
- Multi-Purpose Grease (Operating Temperature Range: -40°C to 65°C)

\*\* Shell AeroShell Grease 33 for improved low-temp spec, or equivalent.

### Procedure:

#### iNetVu™ 1200 Mobile Platform:

1. Remove the two (2) Polarization Covers found on the Feed Horn Assembly.

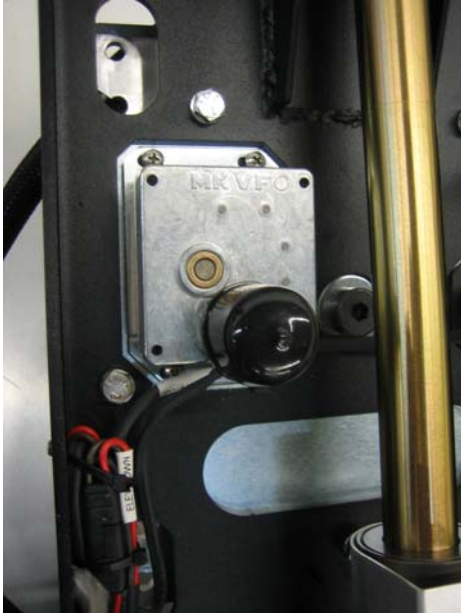


Fig. 3: Covered (top) and exposed (bottom) Polarization Gear Assembly

2. Apply grease to gears.
3. Re-install the two (2) Polarization Covers.

iNetVu™ 740/750/950/980 Mobile Platform:

1. Remove the Elevation Cover.
2. Remove the Polarization Motor.



3. Rotate gear by moving the Polarization, and apply grease until it has been completely applied.
4. Re-install Polarization Motor.

If your Polarization Motor Attachment Plate has slotted holes, ensure that when you install the Polarization Motor, you slide the motor towards the main polarization gear (as far to the right as possible).



Fig. 4: Installed Slotted Polarization Motor Attachment Plate

## 2.2.6. Grease Application to Azimuth Gear Assembly

### Required Materials:

- Phillips Screwdriver
- Standard Grease Gun
- Multi-Purpose Grease (Operating Temperature Range: -40°C to 65°C)

\*\* Recommended: Shell AeroShell Grease 33 for improved low-temp spec, or equivalent.

### Procedure:

1. Raise the iNetVu™ Mobile Platform.
2. Remove Elevation and Azimuth Covers.
3. Unscrew Azimuth Motor and lay on the Azimuth Plate.
4. Locate the three (3) Grease Fittings located on the Azimuth Plate. The two (2) Outer Grease Fittings are located on the Azimuth Plate and one (1) Inner Grease Fitting is located on the Azimuth Bushing inside the main assembly. One other grease fitting is located near the clevis bracket under the actuator.

Refer to the Figures below for the Grease Fitting Locations.

5. Rotate the Azimuth and apply grease to the two Outer Grease Fittings at several locations ensuring that you have covered the entire mechanical range of the Azimuth.
6. Apply Grease to the Inner Grease Fitting.
7. Center the Azimuth and re-install the Azimuth Motor.
8. Re-install the Elevation and Azimuth Covers.

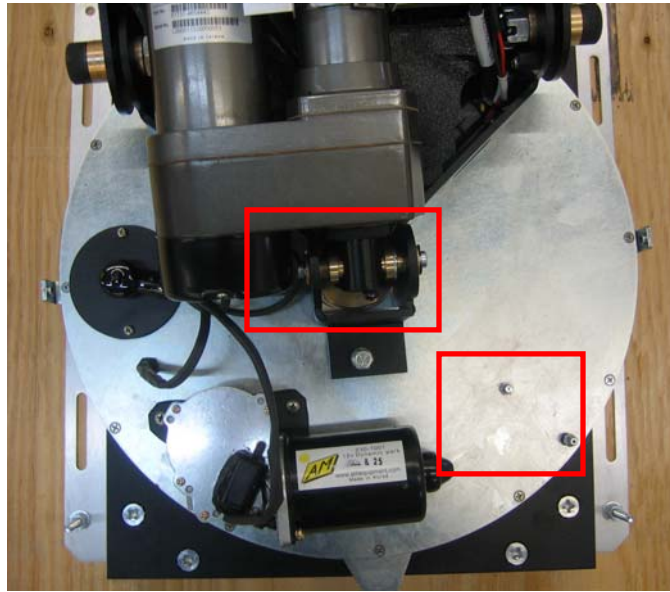


Fig. 5: 740/750/950/980 Azimuth Plate Grease Fitting Locations

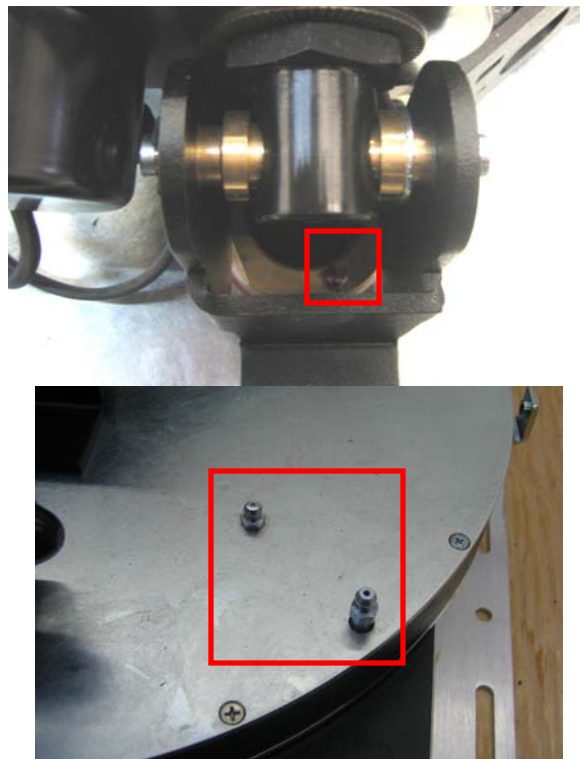
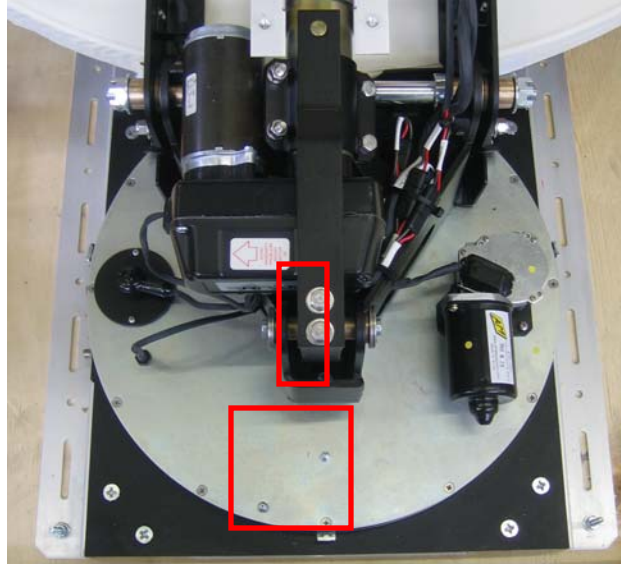


Fig. 6: 740/750/950/980 Detailed Azimuth Plate Grease Fitting Locations





*Fig. 7: 1200 Azimuth Plate Grease Fitting Locations*



*Fig. 8: 1200 Inner Grease Fitting Locations*

### 2.2.7. Emergency Stop Switch Operation Check

This Maintenance Check is only required for users with Emergency Stop Switches installed.

#### Required Materials:

- None

#### Procedure:

1. Locate the two (2) Emergency Stop Switches located on the Base Plate.



Fig. 9: Emergency Stop Switch Location

2. Clean off any obstructions from the Emergency Stop Switch Assembly.
3. Using either the iNetVu™ Software or Handheld Controller, manually move the Antenna, and verify the operation of the BOTH Emergency Stop Switches.

### 2.2.8.Cleaning 980 / 1200 Rear Antenna Cover

This Maintenance Check is only required for users with a Rear Antenna Cover installed onto their iNetVu™ 980 or 1200 Mobile Platform.

#### Required Materials:

- Any type of mild soap / cleaning agent
- Cleaning Materials

#### Maintenance / Cleaning Tips:

- Keep the fabric clean. This is the best protection against mildew. Even on mildew resistant fabric, mildew can grow on accumulated dirt of foreign materials that remain on the top surface and eventually damage or strain the fabric.
- Wash fabric with mild soap and immediately and thoroughly rinse.
- Hose down fabric every month or so during the spring, summer, and fall, and ensure complete drying.
- Ensure small tears are repaired promptly.
- Do not use high-pressure hoses or steam.
- Do not use wire or stiff brushes, harsh detergents, abrasive cleaners or chlorine bleach.



**Material:** Acrylic Coated, 100 % Polyester

**Weight:** 9.6-oz./sq. yard

#### Features:

- Protects Antenna from snow, sand, rain and ice accumulation
- Acrylic Coating helps keep the fabric clean
- Water Resistant and Repellent
- Ultraviolet Resistant
- Mildew Resistant
- Superior Tensile Strength and Tear Strength
- Exceptional Dimensional Stability
- Quick Drying
- No Puckering or Fraying
- Heat Sealable
- Accepts Graphics
- Flame Retardant



**Warranty Information:**

C-Com Satellite Systems Inc warrants the above mentioned for one (1) year against defects in materials and workmanship from the date of purchase. This warranty protects against damage to your canopy under normal conditions. It does not cover damage from acts of God, vandalism, neglect or improper use.

### 2.2.8.1. Installation Rear Antenna Cover:

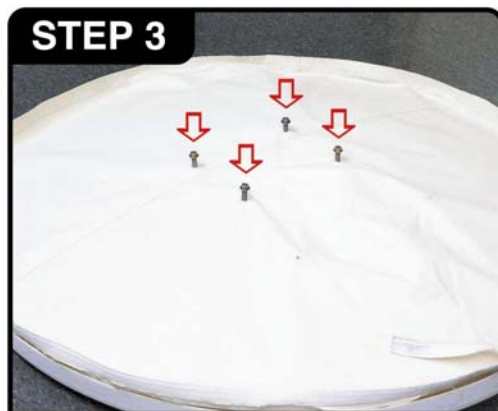


Place the reflector face down.

[ **New Installation:** Clean the reflector's surface thoroughly with a grease cutting cleaner and allow to dry. Using the supplied 1.5" hook Velcro, peel off the back strip ½ meter at a time, and align flush with the backside edge of the reflector. Once fully placed, apply pressure on the surface to ensure full adhesive contact. Allow 24 hrs for full cure. ]



Position the reflector cover over unit, aligning the strap and opening with the notch at the base of the reflector.



[ **Previously Installed:** Through the openings in the cover, insert four (4) bolts into mounting threads and tighten a few threads. ]

[ **New Installation:** Proceed to Step 4 ]



To secure the cover to the reflector, start with the opening at the base of the reflector. Pull the cover downward over the lip of the unit and affix the Velcro with the seam roughly at the edge as shown. The cover will leave approximately  $\frac{1}{4}$ " of the reflector edge exposed.



Pull the cover tight and affix the over in the order shown above to ensure a wrinkle-free assembly. Area 9 will remain slack in order to allow for mounting onto the iNetVu™ Mobile Platform.

**[ New Installation:** Holes are required in the cover in order to insert the mounting bolts. Locate the mounting locations on the reflector, and use a soldering iron or sharp knife to cut a 'cross'. Fastening of the reflector to the iNetVu™ will keep the fabric from fraying ]



Once the entire perimeter has been secured, the reflector is now ready to be mounted to the iNetVu™ Mobile Platform. Ensure that the Velcro strap is secured after installation.

## **3. TROUBLESHOOTING GUIDE**

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### **3.1. Required Material**

Listed below are the materials and tools required for identifying and resolving issues for the iNetVu™ Mobile System

- ❑ Varies according to type of issue

## **3.2. Common Errors**

The following section describes the various common errors which may appear during the use of the iNetVu™ Mobile System.

A definition/cause for the Error, and possible solutions for resolving that particular error will be provided.



### 3.2.1. Elevation Related

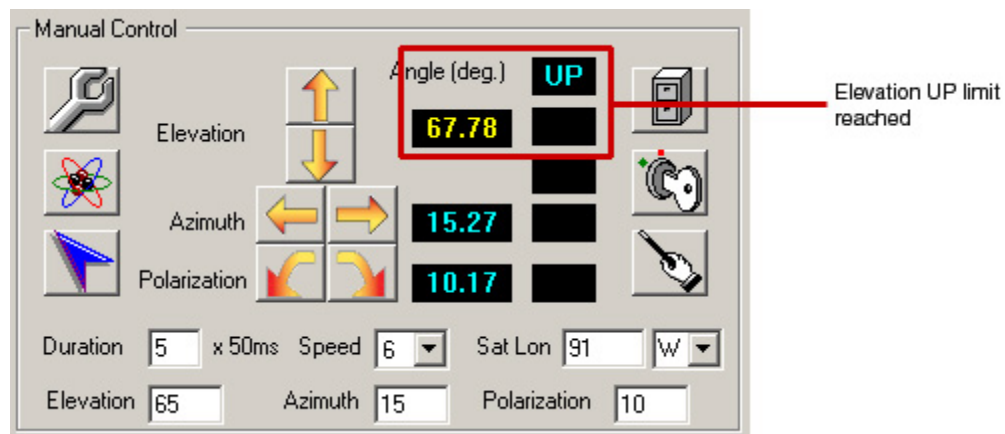
#### 3.2.1.1. Up Limit Error

Cause:

Attempted to raise Elevation of reflector past the Up Limit.

Solution:

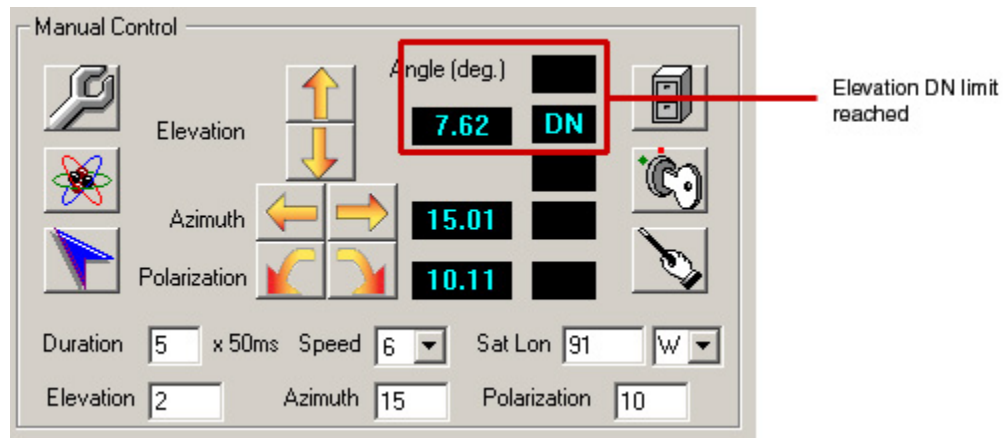
If the Elevation Up Limit turns ON at an angle of less than 65 degrees, the Elevation Up Limit Switch requires to be adjusted.



### 3.2.1.2. Down Limit Error

Cause:

Attempted to move the azimuth while the DN Limit is turned on



Solution:

Move the elevation UP, until the DN limit turns OFF, and move the azimuth freely.

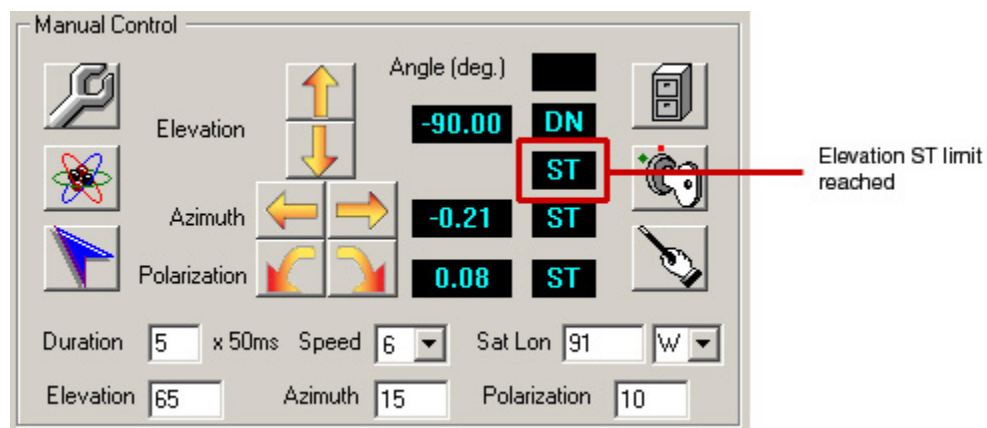
### 3.2.1.3. Stow Limit Error

Cause:

Attempted to move the reflector in any position other than Elevation UP while the dish is in the stowed position.

Solution:

Raise the reflector to an elevation where the ST and DN Limit indicators are turned off.



**Note:** Elevation ST switch could be ON as a result of the pushed emergency stop switch

### 3.2.1.4. Elevation Current Limit Error

#### Cause 1:

Current used to move the Elevation exceeds the fixed limit, which resulted in a current spike. The Mobile Platform may have been obstructed by a foreign object and does not have enough clearance to elevate up or down.

#### Solution 1:

Ensure that the path of the Elevation arm has enough clearance for free movement.

#### Cause 2:

Elevation Current limit is set too low.

#### Solution 2 (5000/9000 Controllers):

1. Switch to **CONFIG** mode
2. Go to **Maintenance**.
3. Click **Advanced**.

Verify the default speeds and currents are set (see Appendix A – 5000/9000 Controller)

#### Solution 2 (7000 Controller)

1. Go to **Maintenance**
2. Ensure Elevation Slow Speed is the default value (verify with 7000 Manual)
3. Ensure the Current @ Speed 9 and the Current @ Speed 6 are default values (verify with Appendix B - 7000 Controller)

### 3.2.1.5. Elevation Jam Error

Cause:

Indicates that current is being sent to the Mobile Platform to deploy the elevation, but the Elevation angle does not change.

Solution 1:

Ensure that the Motor Control Cable is securely connected at the iNetVu™ controller and Mobile Platform.

Cause 2:

If the Mobile Platform physically moves, and the Stow ST Limit is off, but the Elevation angle doesn't change, then it may be a problem related to the Inclinometer.

Solution 2:

Replace inclinometer\_(refer to section 4.4 of this manual)

Cause 3:

If the Mobile Platform doesn't physically move and there is no Elevation current reading, then it may be a problem related with the iNetVu™ Controller.

Solution 3:

Contact C-Com Satellite Systems Inc Support.

Cause 4: Burned Fuse.

Solution 4: Replace the 15 AMP Elevation Motor Fuse on the controller board.

## 3.2.2. Azimuth Related

### 3.2.2.1. Azimuth Current Limit Error

Cause 1:

Current used to move the Azimuth exceeds the fixed limit, which resulted in a current spike. The Mobile Platform may have been obstructed by a foreign object and does not have enough clearance to rotate left or right.

Solution 1:

Ensure that the Azimuth path has enough clearance for free movement.

Cause 2:

Azimuth Current limit is set too low.

Solution 2:

Verify the default slow speed on the Azimuth, and Default Current Limits depending on the controller and platform type. Modify if Required.

5000 / 9000 – Go to Advanced in the Maintenance Menu (ensure your in configuration mode)

7000 Controller – Go to the Maintenance Menu, and check in the Azimuth section.

See appendix for details on default speeds and limits.

### 3.2.2.2. Azimuth Jam Error

Cause 1:

Indicates that current is being sent to the Mobile Platform to deploy the Azimuth, but the Azimuth angle does not change.

Solution 1:

Ensure that the Motor Control Cable is securely connected at the iNetVu™ controller and Mobile Platform.

Cause 2:

If the Jam is occurring in one specific location each time the mount is moved either manually, or automatically.

Solution 2:

Perform scheduled maintenance to the iNetVu™ Mobile Platform, and proper greasing is placed on the azimuth gear.

Cause 3: Burned Fuse.

Solution 3: Replace the 10 AMP Azimuth Fuse on the controller board.

Cause 4:

If the Mobile Platform physically moves, and the Stow ST Limit is off, but the Azimuth angle doesn't change, then it may be a problem related to the potentiometer.

Solution 4:

Ensure the potentiometer is properly calibrated. (i.e. 5 turns when polarization is in center position), If so, then the potentiometer might need replacement – contact support.

Cause 5:

If the Mobile Platform doesn't physically move and there is no Azimuth current reading, then it may be a problem related with the iNetVu™ Controller. Contact Support

### 3.2.3. Polarization Related

#### 3.2.3.1. Polarization Current Limit Error

Cause 1:

Current used to move the Polarization exceeds the fixed limit, which resulted in a current spike. The Mobile Platform may have been obstructed by a foreign object and does not have enough clearance to rotate left or right.

Solution 1:

Ensure that the Polarization path has enough clearance for free movement.

Cause 2:

Polarization Current limit is set too low.

Solution 2:

Verify the default slow speed on the Polarization, and Default Current Limits depending on the controller and platform type. Modify if Required.

5000 / 9000 – Go to Advanced in the Maintenance Menu (ensure your in configuration mode)

7000 Controller – Go to the Maintenance Menu, and check in the Polarization section.

See Appendix A for 5000/9000 Controller default speeds and limits.  
See Appendix B for 7000 Controller default speeds and limits

Cause 3:

If the Mobile Platform physically moves, and the Stow ST Limit is off, but the Polarization angle doesn't change, then it may be a problem related to the potentiometer.

Solution 3:

Ensure the potentiometer is properly calibrated. (i.e. 2.5 turns when polarization is in center position), If so, then the potentiometer might need replacement – contact support.



### 3.2.3.2. Polarization Jam Error

Cause:

Indicates that current is being sent to the Mobile Platform to deploy the Polarization, but the Polarization angle does not change.

Solution 1:

1. Ensure that the Motor Control Cable is securely connected at the iNetVu™ controller and Mobile Platform.

Solution 2:

1. Go to **Advanced Controls**
2. Set **Duration** to 100
3. Set **Speed** to H or 9 (Dependant on mode of operation)
4. Click **Polarization CW** in Manual Controls. Monitor the **PL Motor Current** and record the highest value.

Result:

If the Mobile Platform physically moves, and the Stow ST Limit is off, but the Polarization angle doesn't change, then it may be a problem related to the potentiometer.

If the Mobile Platform doesn't physically move and there is no Polarization current reading, then it may be a problem related with the iNetVu™ Controller.

Cause 3: Burned Fuse.

Solution 3: Replace the 5/10 AMP Polarization Motor Fuse on the controller board.

### **3.2.4.Sensor Related**

#### **3.2.4.1. Sensor Error / Component Sensor Error**

Cause:

- i. The sensor cable is not connected properly on the Controller or Platform Side.
- ii. Connectors between the internal harness and the platform components (i.e. Compass, Inclinator, etc.) have been disconnected
- iii. The pins on the Mobile Platform's sensor connector are broken, or bent, and are making contact with the cable

Solution:

- i. Ensure that the sensor cable is properly connected
- ii. Remove the azimuth, and elevation cover. Verify all trailer connectors between the internal wiring harness and the individual components are securely fastened. The matching connectors between the internal wiring harness, and the components should be labeled.
- iii. Verify that the pins on the Mobile Platform's sensor connector are not broken, bent, and are making contact with the cable

### 3.2.5. Compass Related

#### 3.2.5.1. Compass value is not accurate

##### Cause 1:

A foreign object (e.g. metal, magnet) is radiating a magnetic field that is obscuring the compass from obtaining a reliable reading.

Parameters	
RF Signal (800-3000)	1461.63
RF Threshold (800-2500)	1399.53
Antenna Latitude (deg.)	45.41N
Antenna Longitude (deg.)	75.61W
Antenna Altitude (m)	37.80
Velocity (km/h)	0.00
GPS Heading (deg.)	68.10
Satellite Longitude (deg.)	91.0W
Target Elevation (deg.)	35.60
Target Real Azimuth (deg.)	215.40
Target Dish Azimuth (deg.)	107.41
Target Polarization (deg.)	14.80
Real Azimuth (deg.)	187.98
Compass Heading (deg.)	287.99
EL Motor Current (A)	0.00
AZ Motor Current (A)	0.00
SK Motor Current (A)	0.00

##### Solution 1:

1. Ensure there are no foreign objects (e.g. metal, magnet) around the Mobile Platform.
2. Switch to **CONFIG** mode. (5000/9000 Only)
3. Go to **Maintenance**.
4. Click **Check CP**.
5. The Mobile Platform will now orient itself to North, East, South, and West.
6. Pay attention to the **Compass Heading** in the Parameters display as well as the Message Panel, and record the values.
7. If you receive a pass compassed, you may continue operating normally.

8. If your compass fails accuracy, compass may require re-calibration after finding satellite.

##### Solution:

Ensure that the front of the iNetVu™ Mobile Platform's front (end with Azimuth plate) is facing North.



Go to **Maintenance**.  
Click **Calibrate CP**

9. Check the Compass once more, if all works well, you may continue.
10. If you compass still fails, your compass needs replacement. You may override the compass or use Full Search in this case.

### **3.2.6. Wiring Related**

#### **3.2.6.1. USB Communication Failure (5000/7000/9000)**

A conflict with USB communication has occurred. Reboot the PC or Ensure iNetVu™ Controller is listed in the device manager.

#### **3.2.6.2. Serial Communication Failure**

1) Ensure the correct COM port is selected in the software for communication and try again.

2) Contact support to ensure the Serial Connection in the 9000 Controller is functional (do not take off the 9000 controller cover, unless instructed by support)

#### **3.2.6.3. Network Communication Failure**

Ensure the Controller/Router/Modem are all operating on the same network and the proper IP addresses have been set. See corresponding controller manual for details.

### 3.2.7.GPS Related

A black rectangular box with a thin white border containing the text "GPS FAILED" in red, bold, sans-serif capital letters.

Cause 1:

GPS Cable is not connected.

Solution 1:

Verify GPS cable is securely connected.

Cause 2:

A foreign object is obstructing the GPS antenna.

Solution 2:

Ensure there are no foreign objects obstructing the GPS antenna from a clear view of the sky.

Cause 3:

Overcharge in GPS Cable

Solution 3:

1. Turn off the iNetVu™ Controller
2. Unplug GPS connector from the back of the iNetVu™ controller and ground it.
3. Wait 5 seconds.
4. Re-connect GPS antenna and turn on the iNetVu™ controller.
5. Observe the GPS Coordinates on the **Advanced Controls** menu. It may take a couple of minutes to update.

Final Solution:

Contact C-Com Satellite Systems Inc Technical Support group for replacement.

### 3.2.8. Calibration Related

#### 3.2.8.1. Azimuth Calibration

Cause:

Azimuth requires re-calibration if

- 1) A new platform is used on a previously used controller, or if a new controller is used on a previously used platform.
- 2) An Azimuth Calibration is also required if the Azimuth Pot Zero, or Pot Factor have been changed due to switching between platforms in configuration, or manual changes.
- 3) System is unable to find the Stow Limit near the Azimuth = 0 position.

Solution:

1. Go to **Maintenance**
2. Click **Calibrate AZ**

#### 3.2.8.2. Polarization Calibration

Cause:

- 1) A new platform is used on a previously used controller, or if a new controller is used on a previously used platform.
- 2) An Azimuth Calibration is also required if the Azimuth Pot Zero, or Pot Factor have been changed due to switching between platforms in configuration, or manual changes.
- 3) System is unable to find the Stow Limit near the Azimuth = 0 position.

Solution:

1. Switch to **CONFIG** mode.
2. Go to **Maintenance**
3. Click **Calibrate PL**

## **4. REPAIRS AND REPLACEMENTS**

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## 4.1. ST/UP/DN Limit Adjustments

### Products Affected:

- **ME-Generation Mobile Platforms**
- **A-Generation Mobile Platforms**

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### Description:

This article describes the steps involved for adjusting the Elevation Limit Switches on all ME & A Generation Mobile Platforms.

### Required Materials:

- ½" Wrench
- Phillips Screwdriver

### Operational Requirement:

- Space between Limit Switch and Magnet Bracket must be **3mm to 5 mm**.
- Once space requirement is met, re-position Magnet Bracket in order to adjust the angle at which the Limit Switch is triggered.

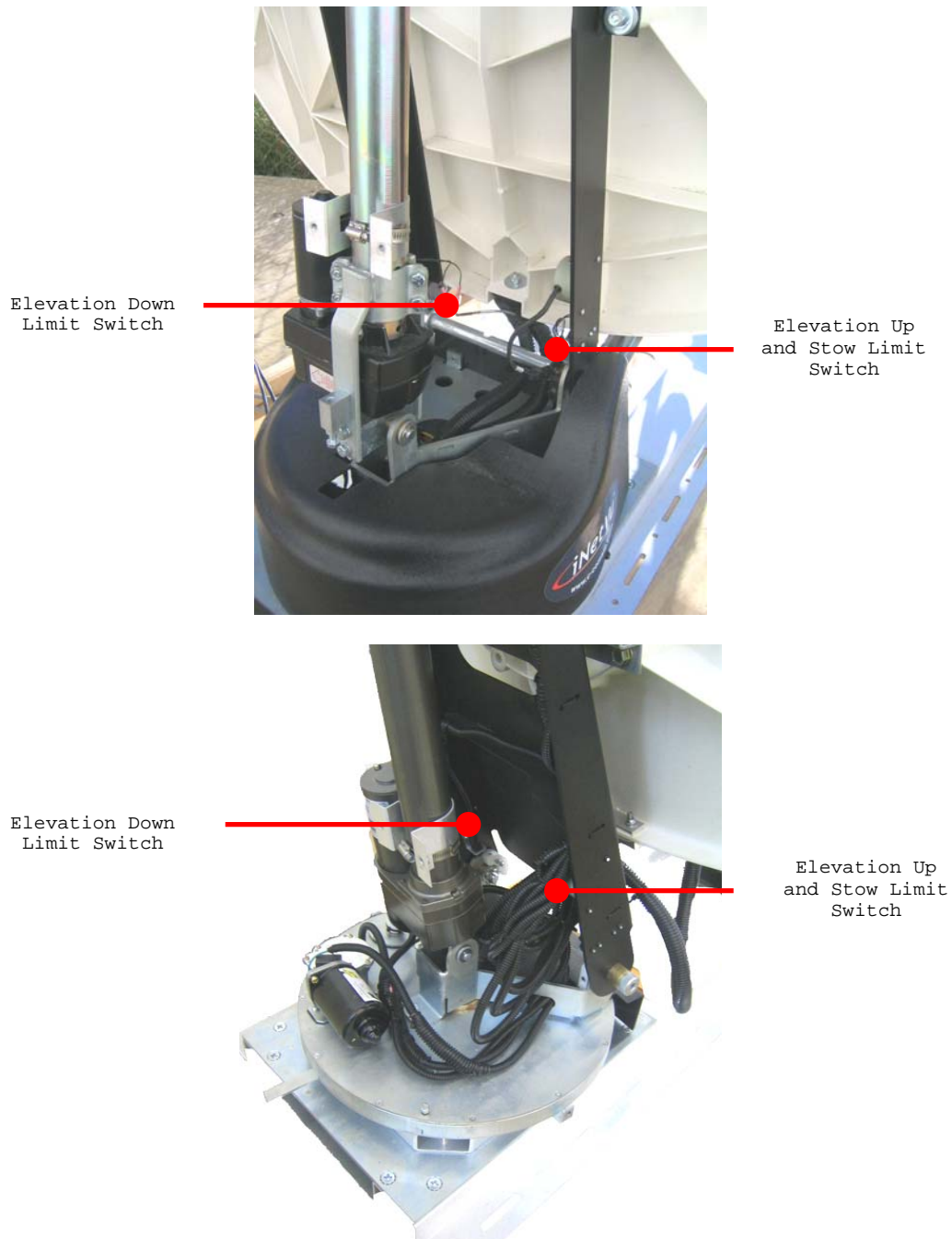


Fig. 10: Limit Switch locations on 1200 (top) and 980/950/740 (bottom)

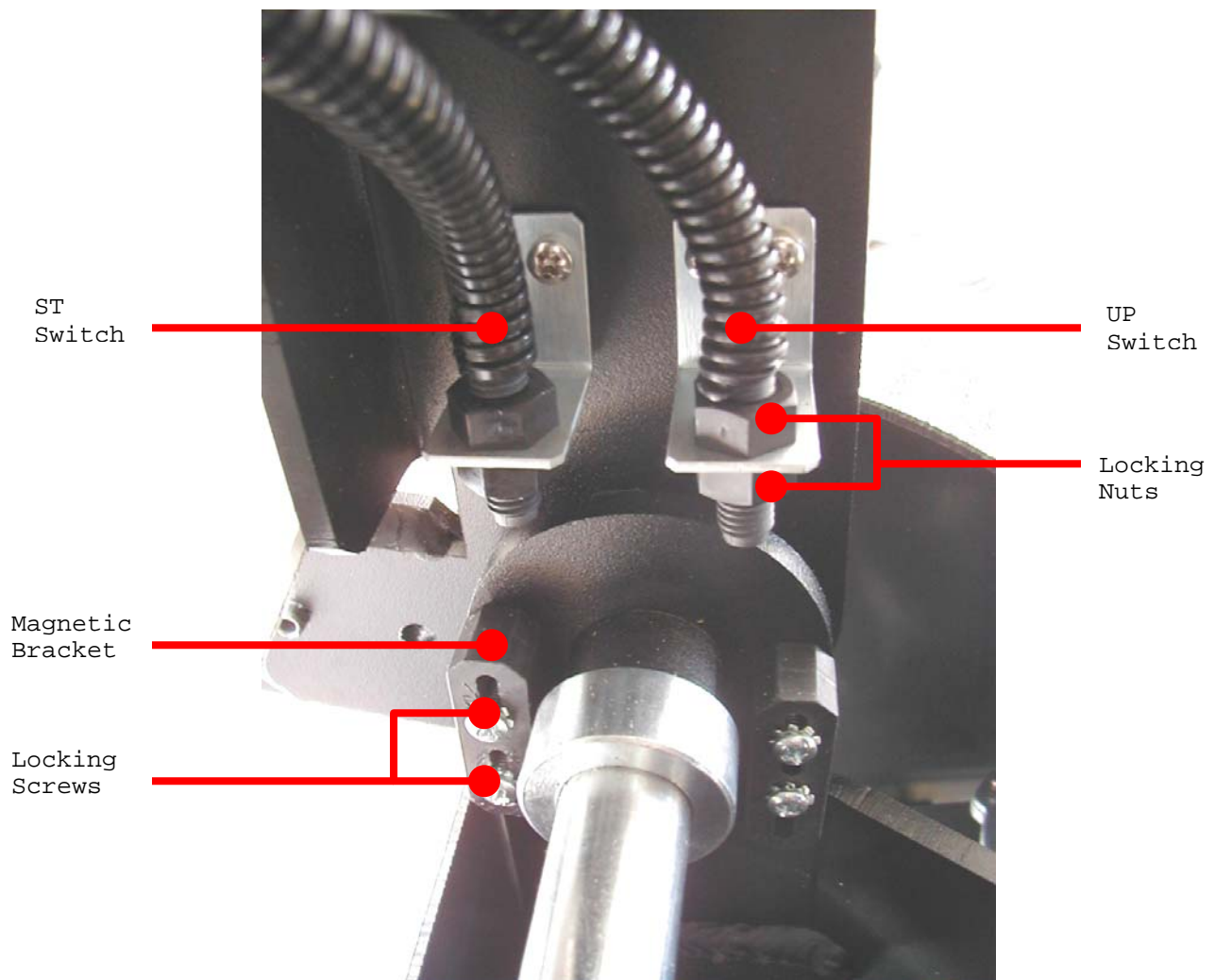


Fig. 11: Elevation ST and UP Limit Switches

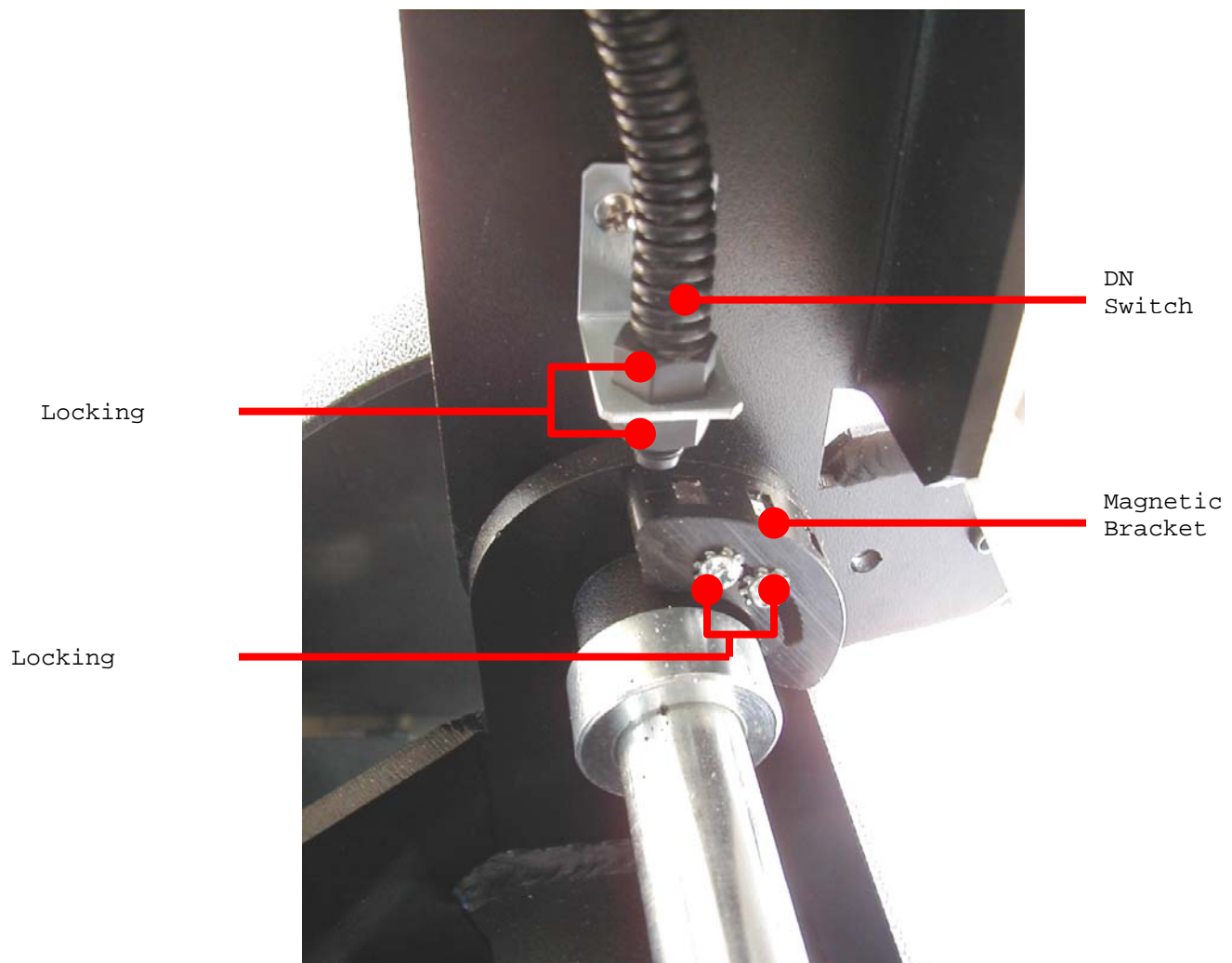
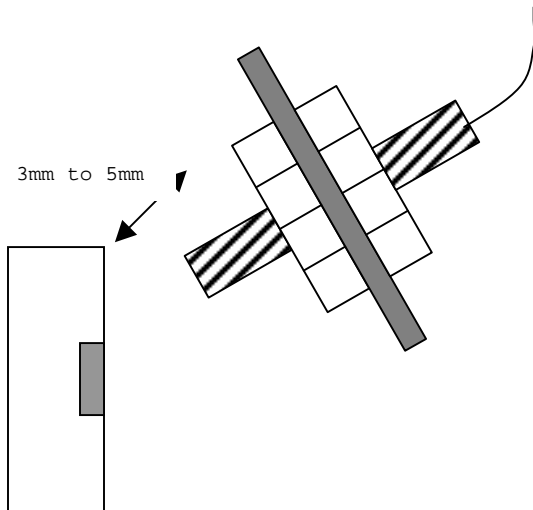


Fig. 12: Elevation DN Limit Switch



#### Elevation UP Limit Switch

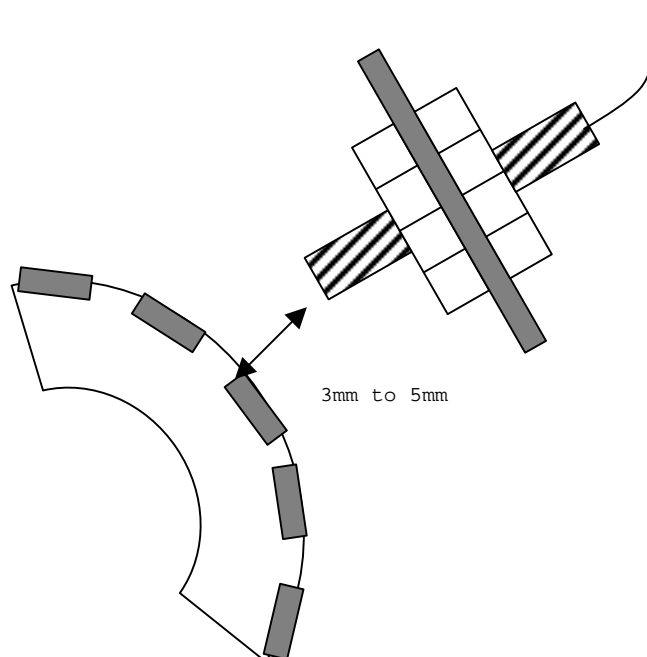
- As the Antenna is raised, the Elevation UP Limit Switch rotates around the center axis.
- When it reaches the Magnet Bracket and detects the Magnetic Field, the switch will open/close and will trigger an Elevation UP Limit Error in IMS indicating that the Elevation UP Limit has been reached.
- Typically, the Elevation UP Limit should be set above the following:
  - 65° (740/950 Mobile Platforms)
  - 75° (1200 Mobile Platforms)

#### Elevation Stow Limit Switch

- As the Antenna is being stowed, the Elevation STOW Limit Switch rotates around the center axis.
- When it reaches the Magnet Bracket and detects the Magnetic Field, the switch will open/close and will trigger the Elevation STOW Limit in IMS indicating that the Elevation Stow Limit has been reached, and that the Mobile Platform is now in the Stowed Position

#### Elevation Down Limit Switch

- As the Antenna is lowered, the Elevation DOWN Limit Switch rotates around the center axis.
- When it reaches the Magnet Bracket and detects the Magnetic Field, the switch will open/close and will trigger the Elevation DN Limit in IMS indicating that the Elevation DN Limit has been reached.
- While the Elevation DN Limit Indicator is ON, the user will not be able to move the Antenna left or right. This is used to protect the user from causing damage to his/her vehicle as well as the Mobile Platform.



**Solution(s):**

Use the following steps to adjust the Limit Switches:

Up (UP) Limit Switch

The Elevation Up Limit Switch Indicator should be ON above:

- **65°** for 0.74/0.95/0.98 Mobile Platforms
  - **75°** for 1.2/1.8 Mobile Platforms
- 1) Remove Elevation Cover.
  - 2) Locate Elevation Up Limit Switch.
  - 3) Start iNetVu Mobile Software.
  - 4) Go to **Advanced Controls**.
  - 5) Set **Elevation** to 60 (70 for 1.2 Mobile Platforms), **Azimuth** to 0, and **Polarization** to 0 in Manual Controls.
  - 6) Click **Deploy Dish**.
  - 7) Adjust the space between the Limit Switch and Magnet to **3-5 mm** by loosening the Locking Nuts and sliding the Limit Switch either closer to or further from the Limit Switch, and also adjusting the position of the Magnet Block to help accommodate the **3-5 mm** gap.

Typically, there are approximately 6-7 threads of the Limit Switch exposed on the base.

- 8) Set **Duration** to 10 and **Speed** to 7.
- 9) Click **Elevation Up**, until the Elevation UP Indicator comes ON, and you receive an "Elevation UP Limit Error".
- 10) If the Elevation Angle is less than 65° (75° for 1.2 Mobile Platforms), lower the Elevation and re-adjust the magnet block, by loosening the locking screws until satisfactory results are met.

It is imperative to maintain the 3-5 mm gap between the Limit Switch and Magnet at the Elevation at which the Elevation UP Indicator comes ON.

- To increase the UP Limit Angle (i.e. Switch turns on later), move the magnetic bracket lower.
- To decrease the UP Limit Angle (i.e. Switch turns on earlier), move the magnetic bracket higher.

#### Down (DN) Limit Switch

The Elevation DN Limit Switch Indicator should be ON between:

- **0° - 10°** for 0.74/0.95/0.98 Mobile Platforms
- **5° - 10°** for 1.2 Mobile Platforms

- 1) Remove Elevation Cover.
- 2) Locate Elevation DN Limit Switch.
- 3) Start iNetVu Mobile Software.
- 4) Go to **Advanced Controls**.
- 5) Set **Elevation** to 12, **Azimuth** to 0, and **Polarization** to 0 in Manual Controls.
- 6) Click **Deploy Dish**.
- 7) Adjust the space between the Limit Switch and Magnet to **3-5 mm** by loosening the Locking Nuts and sliding the Limit Switch either closer to or further from the Limit Switch, and also adjusting the position of the Magnet Block to help accommodate the **3-5 mm** gap.

Typically, there are approximately 4-5 threads of the Limit Switch exposed on the base.

- 8) Set **Duration** to 10 and **Speed** to 5.
- 9) Click **Elevation Down**, until the Elevation DN Indicator comes ON.
- 10) If the Elevation Angle is not between the values stated above, raise the Elevation and re-adjust the magnet block, by loosening the locking screws until satisfactory results are met.

It is imperative to maintain the 3-5 mm gap between the Limit Switch and Magnet at the Elevation at which the Elevation UP Indicator comes ON.

- To increase the DN Limit Angle (i.e. Switch turns on later), rotate the magnetic bracket away from the Limit Switch (clockwise).

- To decrease the DN Limit Angle (i.e. Switch turns on sooner), rotate the magnetic bracket towards from the Limit Switch (counter-clockwise).

### Stow (ST) Limit Switch

After clicking **Stow Antenna**, The Mobile Platform will lower itself until the Elevation ST Indicator comes ON. At this time, the Mobile Platform will pause, then initiate a short 2<sup>nd</sup> drive downwards. This 2<sup>nd</sup> drive downwards should begin *BEFORE* the reflector makes contact with the roll bar/soft pad.

Be prepared to click the STOP button should Mobile Platform's 2<sup>nd</sup> drive does not initiate prior to the Reflector making contact.

Adjust the Elevation ST Switch's magnet block to ensure that the reflector firmly secured on the roll bar/soft pad after the 2<sup>nd</sup> drive downwards.

- 1) Remove Elevation Cover.
- 2) Locate Elevation ST Limit Switch.
- 3) Start iNetVu Mobile Software.
- 4) Go to **Advanced Controls**.
- 5) Click **Stow Antenna**.
- 6) Adjust the space between the Limit Switch and Magnet to **3-5 mm** by loosening the Locking Nuts and sliding the Limit Switch either closer to or further from the Limit Switch, and also adjusting the position of the Magnet Block to help accommodate the **3-5 mm** gap.
- 7) If the Antenna does not make contact with the roll bar/soft pad after the 2<sup>nd</sup> drive, or if the Antenna appears to "over-stow", raise the Elevation and re-adjust the magnet block, by loosening the locking screws until satisfactory results are met.

It is imperative to maintain the 3-5 mm gap between the Limit Switch and Magnet at the Elevation at which the Elevation ST Indicator comes ON.

- To increase the ST Limit Angle (i.e. Switch turns on earlier), move the magnetic bracket upwards.
- To decrease the ST Limit Angle (i.e. Switch turns on later), move the magnetic bracket downwards.

If the above procedure did not solve your problem then contact iNetVu support for further assistance.



## 4.2. Emergency Dish Stow

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In the event that the iNetVu™ Mobile System experiences failure, there are 3 methods available for stowing the dish. Assess your cause for failure and proceed with the appropriate method.

- 1) STOW Button on iNetVu™ 5000/7000/9000 Controller
  - Communication with iNetVu™ Controller failure
  - PC or iNetVu™ Mobile Software failure
- 2) iNetVu™ Mobile Manual Controls
  - Sensor or switch failure (unable to automatically pinpoint ST indicator)
- 3) Direct connection to 12VDC Power Supply / iNetVu™ 3000 Controller
  - iNetVu™ 5000 / 7000/ 9000 Controller failure

### **Solution(s):**

Use the following steps to stow the dish in an emergency situation:

### ***STOW Button on iNetVu™ Controllers***

The **STOP/STOW** push button is located on the front panel of the iNetVu™ 5000/7000/9000 Controller.

Hold down the **STOW** button for **5 seconds** and release. This will allow the iNetVu™ Platform to automatically move to the stowed position.

### ***iNetVu™ Mobile Software Manual Controls***

- 1) If you are using a 5000 or 9000 Controller, advance to the configuration menu, and switch to **CONFIG** mode.
- 2) Go to **Maintenance** and click **Advanced**.
- 3) Disable **ALL** limits and click **Send**.
- 4) Go to **Advanced Controls**
- 5) Set **Duration** to 50.
- 6) Use the manual control buttons to move the dish to the physical stow position in the following order.
  - a. Polarization
  - b. Azimuth
  - c. Elevation (Set the **Duration** to 10 for better control)

Turn Off the iNetVu™ Controller once the antenna is completely stowed, and contact a C-Com Satellite Systems Inc. Technical Support Representative.

## Direct Connection to 12VDC Power Supply

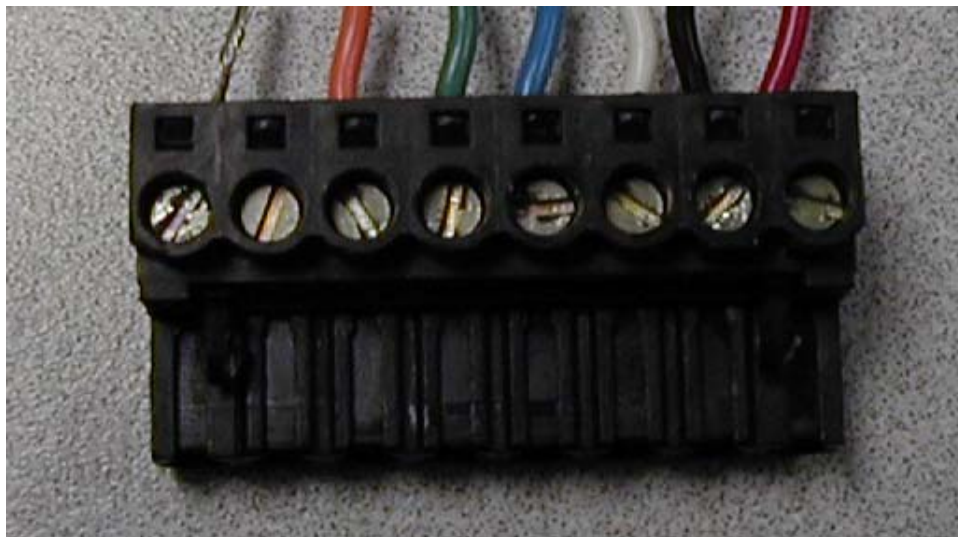
In the event that the iNetVu™ 5000/7000/9000 Controller experiences system failure, a direct connection from the Motor Control cable wires to a 12VDC power supply is required.

The following is a summary of the wire pairs, the parameter that they control and the appropriate polarity for moving the motors.

### 5000 Controller

- Elevation: Red-Black
- Azimuth: White-Blue
- Polarization: Green-Orange/Brown

Elevation UP	(-) RED	(+) BLACK
Elevation DOWN	(+) RED	(-) BLACK
Azimuth CW	(-) WHITE	(+) BLUE
Azimuth CCW	(+) WHITE	(-) BLUE
Polarization CW	(-) GREEN	(+) ORANGE/BROWN
Polarization CCW	(+) GREEN	(-) ORANGE BROWN



- 1) Disconnect Motor Control cable from the iNetVu™ 5000 Controller.

- 2) Connect the 12VDC power source to the appropriate leads (See table above) in order to move the dish to the physical stow position in the following order.
  - a. Polarization
  - b. Azimuth
  - c. Elevation

## 7000/9000 Controllers

- 1) Disconnect Motor Control cable from the iNetVu™ 7000/9000 Controller.



Elevation UP	(-) Pin 1	(+) Pin 3
Elevation DOWN	(-) Pin 3	(+) Pin 1
Azimuth CCW	(-) Pin 9	(+) Pin 7
Azimuth CW	(-) Pin 7	(+) Pin 9
Polarization CCW	(-) Pin 6	(+) Pin 4
Polarization CW	(-) Pin 4	(+) Pin 6

- 2) Connect the 12VDC power source to the appropriate leads (See table above) in order to move the dish to the physical stow position in the following order.
  - a. Polarization
  - b. Azimuth
  - c. Elevation

If the above procedure did not solve your problem then contact iNetVu support for further assistance.

### **4.3. Emergency Stow – Actuator Mechanical Failure**

#### **Description:**

This article describes the steps involved for stowing the iNetVu™ Mobile Platform in the emergency situation where the Actuator experiences a mechanical failure is unable to extend or retract. It is applicable to all sizes and generations of iNetVu™ Mobile Platforms.

#### **Required Materials:**

- Rubber / Plastic Mallet
- Phillips Screwdriver
- Flathead Screwdriver
- Foam Padding / Packing Material
- Strap / Rope for securing Platform Assembly
- Circlip Pliers (MF-Generation Only)

**Solution(s):**

Use the following steps to stow the iNetVu Mobile Platform when the Actuator experiences a mechanical failure:

1. Remove the Elevation Cover using the Phillips Screwdriver.
2. Locate the e-clips at the top of the Actuator assembly.

**Note:** MF Generation Mobile Platforms use circlips instead of e-clips.



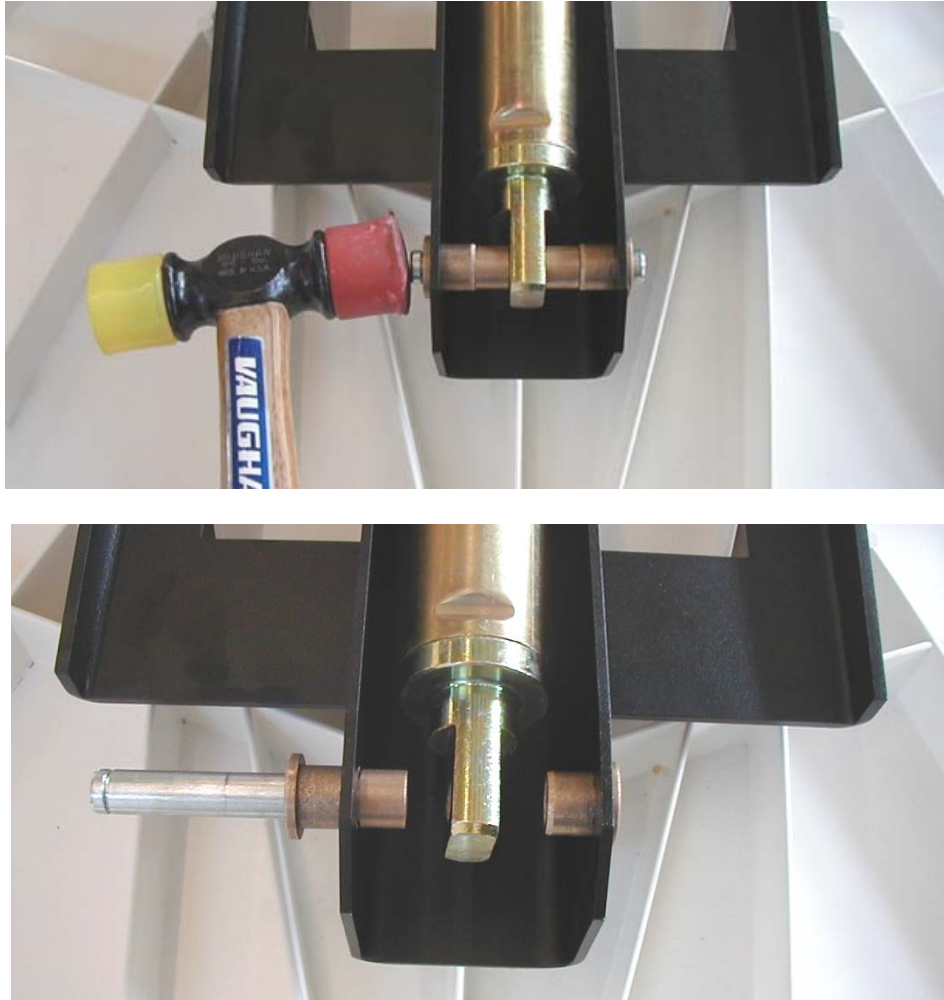
*Fig. 13: E-Clip at the top of the Actuator Assembly*

3. Remove one (1) of the e-clips using the flathead screwdriver to help slide it out. Take care when removing the e-clip because it is under a lot of tension and may “pop-out” very quickly.

**Note:** MF Generation Mobile Platforms Users must use the circlip pliers to remove one (1) circlip.

4. With an assistant supporting the Reflector/Feed Arm, hammer the Clevis Pin out using the Rubber/Plastic Mallet to free the actuator from its assembly.

You may need to slightly lift the Reflector/Feed Arm by hand to make the removal of the Clevis Pin smoother.



*Fig. 14: Hammering Out Clevis Pin (Top) and Loosened Actuator (Bottom)*

5. Once the Clevis Pin is free, slowly lower the Reflector/Feed Arm and Actuator into the stow position by hand.
6. Remove the Clevis Pin, two (2) e-clips, two (2) bushings, any washers and store for later use.
7. The iNetVu™ Mobile Platform will now be effectively in the stowed position, but it is not securely stowed.

8. It is highly recommended to place some padding between the Actuator body and the Elevation Arm, and then strap the entire assembly down to the Base Plate to prevent bouncing or movement of the components until repaired.

If the above procedure did not solve your problem then contact iNetVu support for further assistance.



## 4.4. Replacing Elevation Inclinometer

### Description:

This article describes the steps involved for replacing the Inclinometer on iNetVu™ Mobile Platforms.

### Required Materials:

- Replacement Inclinometer
- Phillips Screwdriver
- Dielectric Grease
- Wire Cutters / Knife
- Tie-wraps
- Handheld Protractor

**Solution(s):**

Use the following steps to replace the Inclinator on all ME/A Series Mobile Platforms:

- 1) Remove Elevation and Azimuth Cover.
- 2) Locate the damaged/failed Inclinator.



*Fig. 1: Inclinator Locations for the iNetVu™ 1200 and iNetVu™ 950/750/750 Mobile Platforms*

- 3) Cut any existing Tie-wraps to remove the Wire Loom surrounding the Inclinator.
- 4) Disconnect the damaged/failed Inclinator from the internal cabling.
- 5) Remove the damaged/failed Inclinator using the Phillips Screwdriver.
- 6) Install the Replacement Inclinator. Ensure that the lower slot is installed so that the screw is at the far-right hand side of the slot.

Refer to the following figure for the proper orientation.



*Fig. 3: Proper Inclinometer Orientation*

7) Apply dielectric grease to the pins on the male connector to ensure connectivity with the Replacement Inclinometer.

8) Connect the Replacement Inclinometer to the Wiring Harness.

9) Prior to “tidying up” the installation, it is recommended to test the functionality of the Inclinometer using the iNetVu™ Mobile Software (Advanced Controls Menu) and a Handheld Protractor. Place your Protractor on the Elevation Arm in order to have the correct reference for verification with the iNetVu™ Mobile Software.

10) Use Tie-wraps to ensure the Cable Bundle is “tidy”.

11) Replace Elevation and Azimuth Covers.

12) Congratulations! The Inclinometer has been successfully replaced.

If the above procedure did not solve your problem then contact iNetVu support for further assistance.

## 4.5. Replacing Azimuth Potentiometer

### Products Affected:

iNetVu™ Platforms: All A-Generation

### Description:

This procedure describes the steps involved to replace the Azimuth Potentiometer for all A-Generation Mobile Platforms.

### Required Materials:

- Phillips screwdriver
- Multi-purpose grease (Temp. Range: -40°C to 65°C)
- 10-turn potentiometer

### Solution(s):

Use the following steps to perform replace the Azimuth Potentiometer:

- 1) Ensure the Antenna Azimuth is in the zero position (approximately 0 degrees) before commencing.
- 2) Remove Elevation and Azimuth covers.
- 3) Locate Azimuth Potentiometer.
- 4) Disconnect Azimuth Potentiometer connectors and remove using Phillips screwdriver. Please remember to take note of the wiring coloring system for the connections. **DO NOT** discard the faulty potentiometer, as it is required to be sent back to C-Com Satellite Systems for failure inspection tests.



**Fig. 15:** Azimuth Potentiometer location for A1200 (left) and A980 (right)



The new potentiometer must be centered prior installation. Failure to center the potentiometer can cause it to produce faulty readings and/or irreversible damage.

- 5) To center the new potentiometer:



*Fig. 16: Gear underside of potentiometer*

- a. Rotate the potentiometer gear CCW until it stops.
  - b. Rotate the potentiometer gear CW five (5) full rotations. This will approximately center the potentiometer.
- 6) Connect potentiometer connectors, apply grease to the gearing, and insert new potentiometer into the opening and secure, but do not tighten.



*Fig. 17: Wire connectors (left) and securing Azimuth Potentiometer (right)*

- 7) To verify functionality:

- a. Power on the system and start iNetVu™ Mobile Software
- b. Go to **Advanced Controls**.

- c. Ensure that there are no red indicators flashing.
- d. Verify that the Azimuth Angle is approximately  $0 \pm 10^\circ$ .

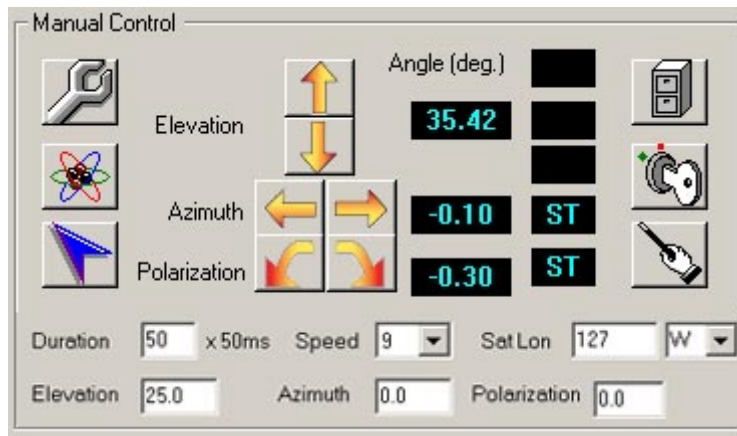


Fig. 18: Manual Controls

- I. If the Azimuth Angle is not approximately  $0 \pm 10^\circ$ , switch to **CONFIG** mode.
- II. Go to **Maintenance**.
- III. Verify that the **Pot Zero** and **Pot Factor** in the Azimuth Parameters match the following table. These are the default values that your system should be operating with.

	PLATFORM TYPES				
	A1800A	A1200C	A0980B	A0740B	A0660A
AZ POT ZERO	280.7808	282.88	342.17	342.17	342.17
AZ POT FACTOR	0.5484	0.5525	0.6683	0.6683	0.6683

Fig. 19: Azimuth Potentiometer Parameters

- IV. Restore to default values if required and click **Send AZ/Send All**. Click **Yes** when asked to save to the EPROM.

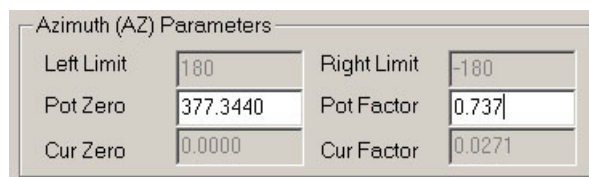


Fig. 20: Azimuth Parameters in the Maintenance Menu

- V. Verify Azimuth Angle again.
- e. Set **Elevation** to 25.0
- f. Set both **Azimuth** and **Polarization** to 0.0.
- g. Click **Deploy Dish** to raise the dish.
- h. Set **Duration** to 50 x 50ms
- i. Set **Speed** to 9

- j. Click **Azimuth Right**. The dish should move in small increments and the Azimuth Angle will change. This indicates normal operation.
- 8) To calibrate:
- a. Ensure there is sufficient clearance for the dish to move and rotate.
  - b. Go to **Maintenance**.
  - c. Click **Calibrate Azimuth**.
  - d. When calibration process is complete, go to **Advanced Controls**.
  - e. Click **Find Satellite**.
  - f. When the system has found and locked on satellite, click **Calibrate Target**. This concludes the calibration process.
- 9) Click **Stop** in **Advanced Controls** to halt all operations.
- 10) Manually rotate the dish CW until it stops. Verify that the Azimuth Angle is  $200 \pm 2^\circ$ .
- 11) Manually rotate the dish CCW until it stops. Verify that the Azimuth Angle is  $-200 \pm 2^\circ$
- 12) Rotate the dish back to stow position.
- 13) Secure new potentiometer and apply silicone to any other wire leads or openings to seal off any moisture exposure.
- 14) Replace Azimuth back and front covers.
- 15) Congratulations! The Azimuth potentiometer has been successfully installed and calibrated.

If the above procedure did not solve your problem then contact iNetVu support for further assistance.

## 4.6. Replacing Polarization Potentiometer

### Products Affected:

iNetVu™ Platforms: All A-Generation

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### Description:

This procedure describes the steps involved to replace the Polarization Potentiometer for all A-Generation Mobile Platforms.

### Required Materials:

- Phillips screwdriver
- Multi-purpose grease (Temp. Range: -40°C to 65°C)
- Replacement Potentiometer

### Solution(s):

Use the following steps to perform replace the Polarization Potentiometer:

- 1) Ensure the Polarization Angle is approximately in the zero position before commencing.
- 2) Remove Elevation cover (iNetVu™ 980/750/740 only).
- 3) Locate Polarization Potentiometer. On the iNetVu™ 1200,1800 the potentiometer is located on the feed arm, and for the iNetVu™ 980/750/740, the potentiometer is located on the Elevation plate.
- 4) Disconnect Polarization Potentiometer connectors and remove using Phillips screwdriver. Please remember to take note of the wiring coloring system for the connections.

**DO NOT** discard the faulty potentiometer, as it is required to be sent back to C-Com Satellite Systems for failure inspection tests.



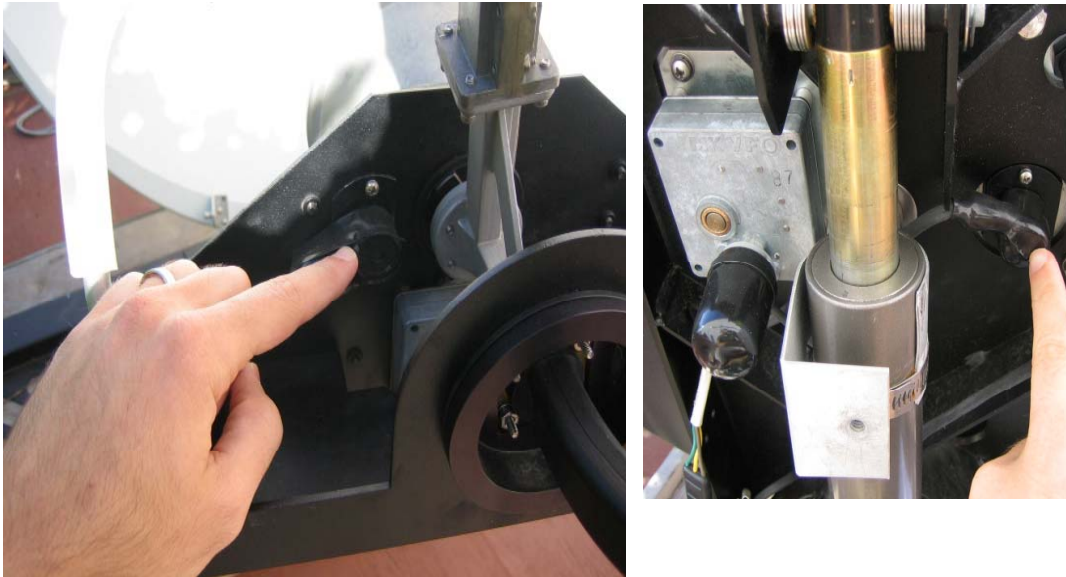


Fig. 21: Polarization Potentiometer location for A1200 (left) and A980 (right)



The new potentiometer must be centered prior installation. Failure to center the potentiometer can cause it to produce faulty readings and/or irreversible damage.

- 5) To center the new potentiometer:



Fig. 22: Gear underside of potentiometer

- c. Rotate the potentiometer gear CCW until it stops.
- d. Rotate the potentiometer gear CW two and a half ( $2\frac{1}{2}$ ) rotations. This will approximately center the potentiometer.

- 6) Connect potentiometer connectors, apply grease to the gearing, and insert new potentiometer into the opening and secure, but do not tighten. Ensure the labels match on the potentiometer cable and the internal harness cable.

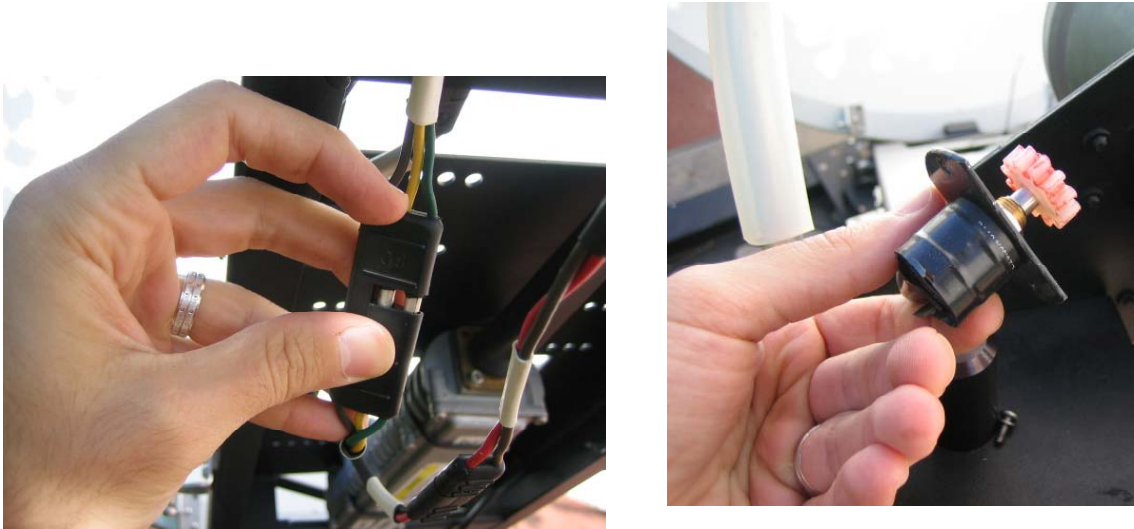


Fig. 23: Wire connectors (left) and Polarization Potentiometer for A1200 (right)

- 7) To verify functionality:
  - a. Power on the system and start iNetVu™ Mobile Software.
  - b. Go to **Advanced Controls**.
  - c. Ensure that there are no red indicators flashing.
  - d. Verify that the Polarization Angle is approximately  $0 \pm 10^\circ$ .

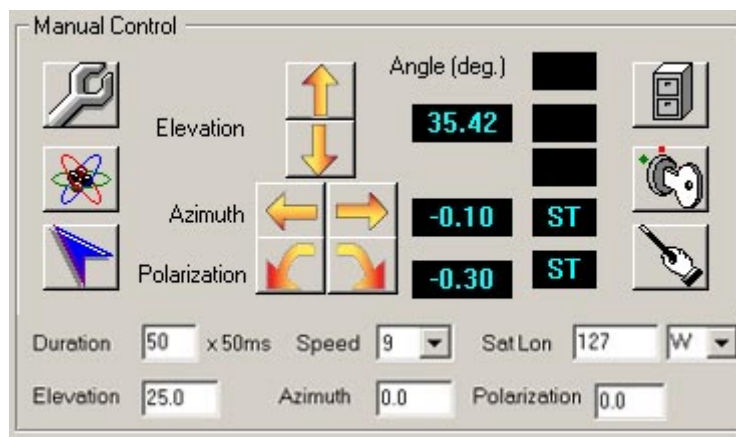


Fig. 24: Manual Controls

- VI. If the Polarization Angle is not approximately  $0 \pm 10^\circ$ , switch to **CONFIG** mode.

- VII. Go to **Maintenance**.
- VIII. Verify that the **Pot Zero** and **Pot Factor** in the Polarization Parameters match the following table. These are the default values that your system should be operating with.

	PLATFORM TYPES				
	A1800A	A1200C	A0980B	A0740B	A0680A
PL POT ZERO	205.4144	197.22	131.79	131.79	131.79
PL POT FACTOR	0.4012	0.3852	0.2574	0.2574	0.2574

Fig. 25: Polarization Potentiometer Parameters

- IX. Restore to default values if required and click **Send PL**. Click **Yes** when asked to save to the EPROM.
- X. Verify Polarization Angle again.
- e. Set **Elevation** to 25.0
  - f. Set both **Azimuth** and **Polarization** to 0.0.
  - g. Click **Deploy Dish** to raise the dish.
  - h. Set **Duration** to 50.
  - i. Set **Speed** to 9
  - j. Click **Polarization CW**. The dish should move in small increments and the Polarization Angle will change. This indicates normal operation.
- 8) To calibrate:
- g. Ensure there is sufficient clearance for the dish to move and rotate.
  - h. Go to **Maintenance**.
  - i. Click **Calibrate Polarization**.
  - j. When calibration process is complete, go to **Advanced Controls**.
  - k. Click **Find Satellite**.
  - l. When the system has found and locked on satellite, click **Calibrate Target**. This concludes the calibration process.
- 9) Click **Stop** in **Advanced Controls** to halt all operations.
- 10) Manually rotate the dish CW until it stops. Verify that the Polarization Angle is:
- |            |                   |
|------------|-------------------|
| A1200:     | $-90 \pm 2^\circ$ |
| A740/A980: | $-70 \pm 2^\circ$ |
- 11) Manually rotate the dish CCW until it stops. Verify that the Polarization Angle is  $+90 \pm 2^\circ$
- |            |                   |
|------------|-------------------|
| A1200:     | $+90 \pm 2^\circ$ |
| A740/A980: | $+70 \pm 2^\circ$ |
- 12) Rotate the dish back to stow position.

- 13) Secure new potentiometer and apply silicone to any other wire leads or openings to seal off any moisture exposure.
- 14) Replace Polarization back and front covers.
- 15) Congratulations! The Polarization potentiometer has been successfully installed and calibrated.

If the above procedure did not solve your problem then contact iNetVu support for further assistance.

## 4.7. Compass Replacement

The Compass relays information to IMS about the Mobile Platform's orientation in reference to True North. By determining the direction the Mobile Platform is positioned, IMS can approximately calculate where in the sky the Antenna will search for the Satellite.

The Compass must be level when attempting to read the heading, and the elevation at which it reads the heading is typically set by default by IMS. The compass heading should typically be  $\pm 2^\circ$



Fig. 26: ME-Generation Compass (Left) and MF-Generation Compass (Right)



Fig. 27: A-Generation Mobile Platform Compass

## Compass Orientation

- COMPASS MUST BE INSTALLED LEVEL in order to receive a proper compass heading
- MF-Generation Compass MUST be installed so that the wire protruding from the Compass FACES TOWARD the Reflector.
- ME-Generation and A-Generation Compass MUST be installed so that the wire protruding from the Compass FACES AWAY FROM the Reflector.

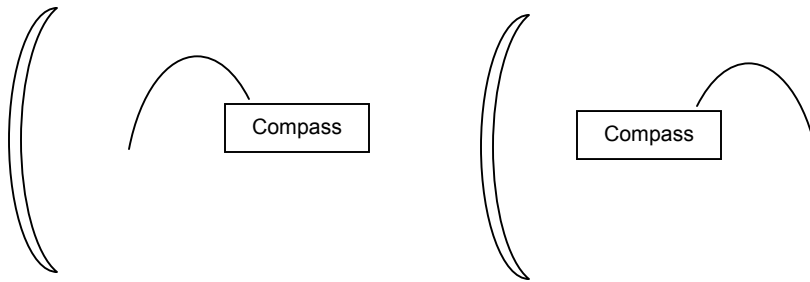


Fig. 28: Compass Orientation for MF-Generation (Left) and ME / A-Generation (Right)

## 4.8. Installing Reflector to iNetVu™ 1200 Mobile Platform

### CAUTION

If this is the first time working with the iNetVu™ Mobile Platform it is highly recommended that you read the entire manual to familiarize with the proper procedure for connecting the cables to the controller and iNetVu™ software operation.

#### Required Materials:

- 1.2m Reflector
- 1200 Mobile Platform Rev. 2.3+
- 2 Ball Joint Gas-shock Springs
- Reflector Assembly Hardware Bag
- Phillips Screwdriver
- 10mm (3/8") Wrench
- 13mm (1/2") Wrench
- Handheld Controller (Optional)

#### Procedure:

Use the following steps to attach a 1.2m Reflector to an iNetVu™ 1200 Mobile Platform Rev. 2.3:

- 1) Remove reflector from crate and any packing materials on the Mobile Platform.
- 2) Raise the Mobile Platform to approximately 30° using the iNetVu™ Mobile Software or the Handheld Controller. For more information regarding the use of the iNetVu™ Mobile Software and its installation, please refer to the iNetVu™ System Manual.
- 3) Peel back the Reflector Back Cover at the base of the Reflector to expose the Gas Spring Bracket mounting holes.



*Fig. 29: Exposed Gas Spring Bracket Mounting Holes*

- 4) Attach Gas Spring Brackets to each side of the Reflector using a Phillips Screwdriver and 10mm (3/8") Wrench.

- a. Ensure that the Ball Joint Stud faces outwards (away from the centre of the Reflector) and that the black button faces the top.
- b. Insert and tighten the two (2) lower screws.



*Fig. 30: Correct Gas Spring Bracket Orientation*

- 5) Re-attach the Reflector Back Cover to the Reflector, leaving the strap at the bottom open.
- 6) Carefully place the reflector onto the Mobile Platform. Ensure that the Reflector Support Bracket at the base of the Elevation Arm fits into the groove at the base of the Reflector.
- 7) There are four (4) carriage bolts included in the Reflector Assembly Kit.

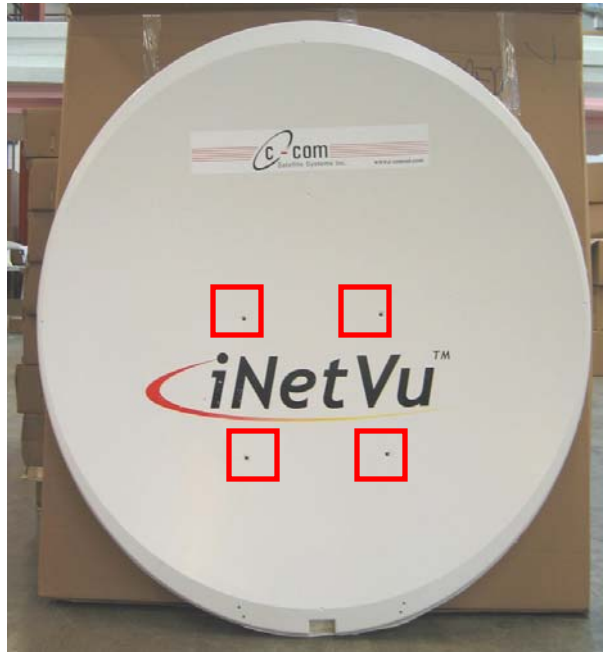


*Fig. 31: Carriage Bolts*



- 8) Insert four (4) carriage bolts through the front of the Reflector in the location depicted below.

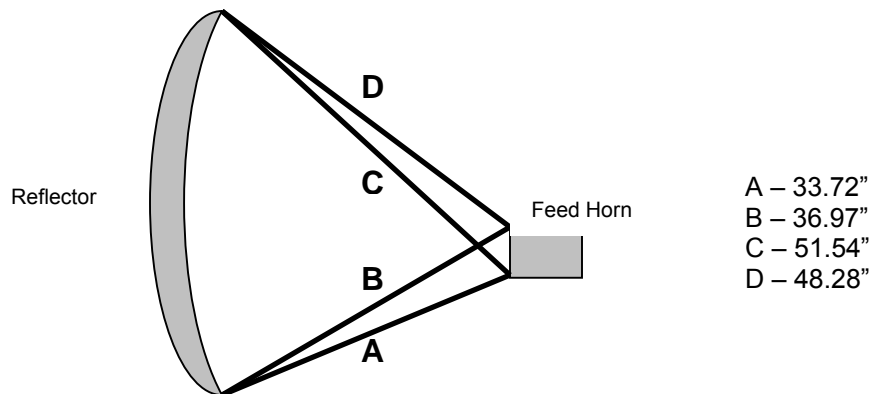
Insert the two (2) SHORT carriage bolts in the UPPER holes and the two (2) LONG carriage bolts in the LOWER holes.



*Fig. 32: Reflector Mounting Locations*

- 9) Secure carriage bolts evenly in a cross pattern at the rear using the flat washers, locking washers and nuts. Tighten to approximately 25 ft/lbs.

- 10) Verify Focal Point (ABCD) Geometry. Measure from the dimples on the top and bottom edge of the reflector, and ensure that dimensions are within  $\frac{1}{4}$  " of the values below.



- 11) Remove the clips from the Ball Joints at the ends of the Gas Springs and place aside.



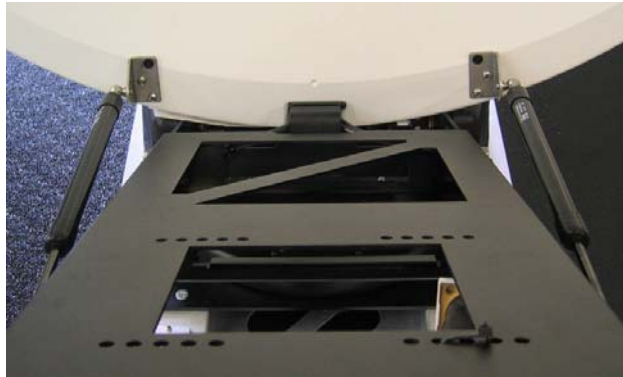
Fig. 33: Removed Clip from Ball Joints



Fig. 34: Gas Shock Spring

- 12) Snap-on the thicker end of the Gas Spring to the Reflector's Gas Spring Brackets. Once this end is snapped into place, re-insert clip.

- 13) By hand, compress the Gas Spring, and snap-on the thinner end of the Gas Spring to the Gas Spring Brackets on the Mobile Platform. Once this end is snapped into place, re-insert clip.



*Fig. 35: Assembled Gas Spring Assembly*

- 14) Repeat Steps 12 and 13 for both Gas Springs.



*Fig. 36: Fully Assembled Reflector Assembly*

- 15) Congratulations! The 1.2m Reflector has been successfully installed on to an iNetVu™ 1200 Mobile Platform.

## 4.9. Installing Reflector to iNetVu™ 1800 Mobile Platform

### **CAUTION**

If this is the first time working with the iNetVu™ Mobile Platform it is highly recommended that you read the entire manual to familiarize with the proper procedure for connecting the cables to the controller and iNetVu™ software operation.

#### **Required Materials:**

- 1.8m Reflector
- 1800 Mobile Platform Rev. 1.0+
- 9/16" Wrench
- Handheld Controller (Optional)
- 1.8m Reflector Mounting Hardware

#### **Procedure:**

Use the following steps to attach a 1.8m Reflector to an iNetVu™ 1800 Mobile Platform Rev. 1.1.

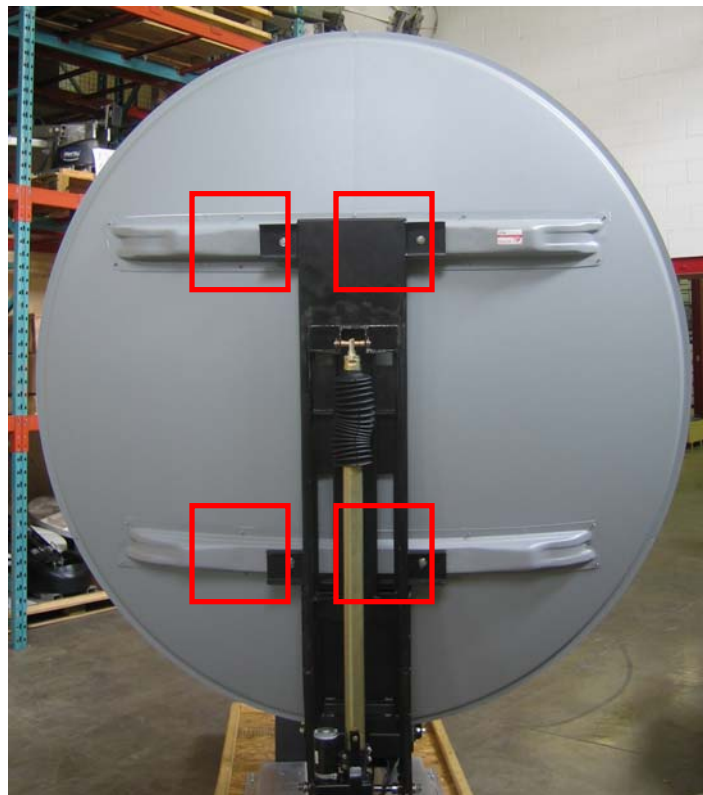
Please note that the 1.8m Reflector is a heavy load and it is strongly recommended that at least 3 people are assisting in the installation of the reflector.

1. Remove reflector from crate and any packing materials on the Mobile Platform.
2. Raise the Mobile Platform to approximately 30° using the iNetVu™ Mobile Software or the Handheld Controller. For more information regarding the use of the iNetVu™ Mobile Software and its installation, please refer to the iNetVu™ System Manual.
3. With the assistance of two (2) other people, align the reflector with the mounting holes located on the Elevation Arm.

Only the four of the mounting holes at the rear of the reflector will be used.



4. Screw in four (4) bolts and flat washers through the Elevation Arm, and secure in place evenly in a cross pattern.

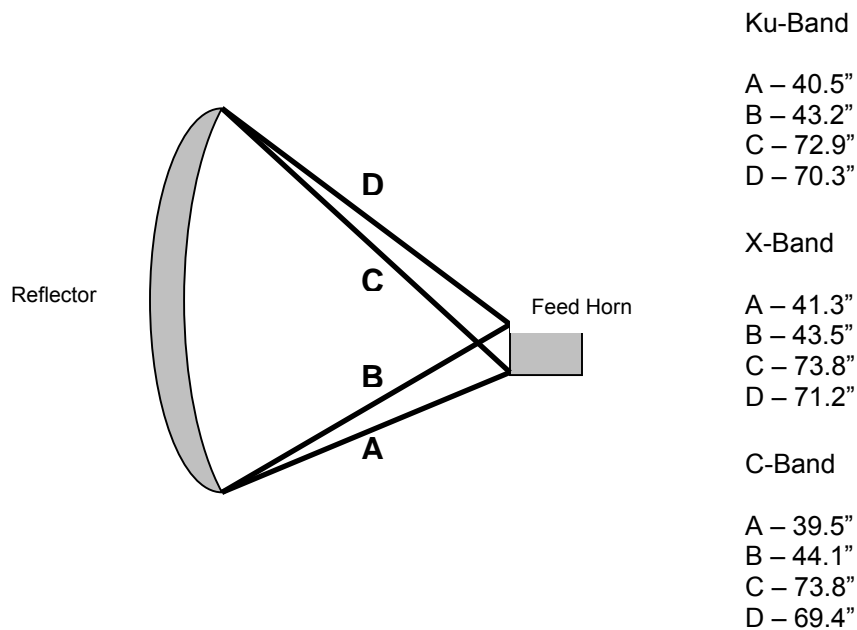


*Fig. 37: Reflector Mounting Locations*



Fig. 38: Reflector Mounting Locations - Close-up

5. Verify Focal Point (ABCD) Geometry. Measure from the outer-most edge on the top and bottom edge of the reflector. Ensure that dimensions are within  $\frac{1}{4}$  " of the values below depending on the type of polarization cage you have installed, whether it be Ku, X, or C Band.





*Fig. 39: Fully Assembled Reflector Assembly*

6. Congratulations! The 1.8m Reflector has been successfully installed on to an iNetVu™ 1800 Mobile Platform.

## 4.10. Installing BUC to iNetVu™ 980 Mobile Platform

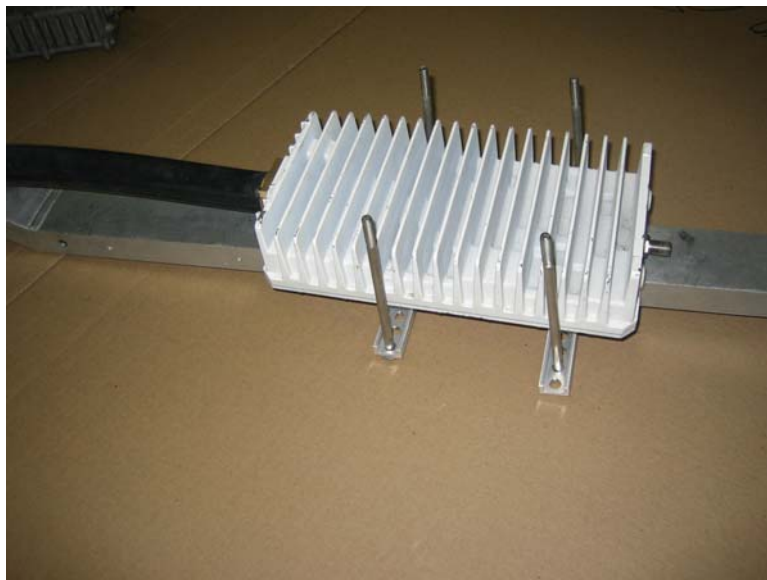
This procedure describes the steps involved for installing a Block Up Converter (BUC) to the iNetVu™ 950 / 980 Mobile Platform.

### Required Materials:

- iNetVu™ 980 Mobile Platform
- BUC
- Universal Transmitter Mounting Bracket Kit
- Four (4) ¼ Flat Washers
- Four (4) ¼.20 NYL Nuts
- Four (4) S/S 4.50 inch Hex Bolts
- Four (4) ¼ Split Washers (only if ¼.20 Nuts are not NYL)
- Two (2) S/S Hex Bolt 5/16" x 3" (ISIS BUC ONLY)

### Procedure:

1. Place and secure the BUC on the underside of the Feed Arm.
2. Place two (2) brackets on the topside of the Feed Arm and insert two (2) 4.5" hex bolts (along with their corresponding ¼ Flat Washers) into each bracket. Ensure that the coaxial connector end is facing the reflector and **the flat edges** of the brackets are facing outwards.

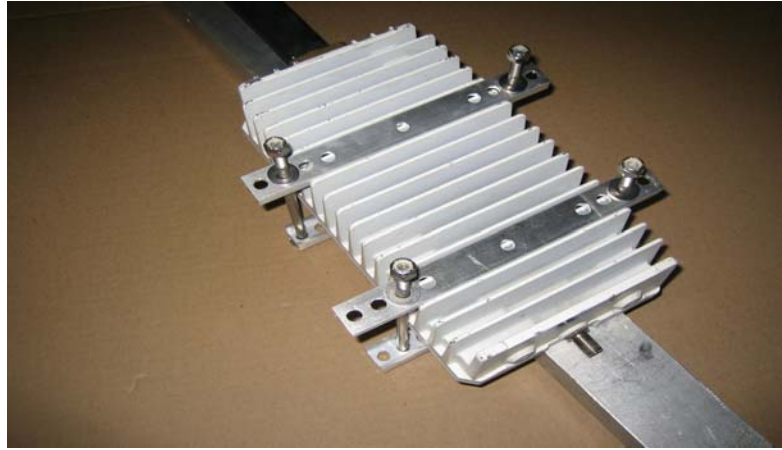


*Fig. 40: Inverted view of BUC and topside brackets*

3. Ensure the hex bolts are securely placed for support. If you are using a larger BUC (2W and up), you may need to use the outer holes of the bracket, to secure the BUC to the Feed Arm.



4. Cover the paired hex bolts with the remaining two (2) brackets on the bottom side of the BUC as depicted in the figure below. Secure tightly using  $\frac{1}{4}$  flat washers, and the  $\frac{1}{4}$ .20 NYL nuts. (If NYL nuts are not available, secure using the  $\frac{1}{4}$ .20 split and flat washers and cover using  $\frac{1}{4}$ .20 nuts)



*Fig. 41: Bottom side brackets caption*

If you have an ISIS BUC, secure the BUC to the side Feed Arm using hex bolts (See Required Materials section).



*Fig. 42: Attaching ISIS BUC*

5. Attach the Flexible Waveguide to the BUC (ensure the polarization on the Flexible Waveguide is exactly as that of the BUC before tightening).
6. Attach the RG6 Cable labeled 'Tx' to the BUC.
7. Tighten all screws and nuts.



*Fig. 43: Fully Assembled iNetVu™ 980 Mobile Platform*

8. Congratulations! The BUC has been successfully installed.

## 4.11. Installing BUC to iNetVu™ 1200/1800 Mobile Platform

This procedure describes the steps involved for installing a Block Up Converter (BUC) to the iNetVu™ 1200/1800 Mobile Platform. The installation procedure described below shows images for a 4W BUC, but may be utilized for any sized BUC installation.

### Required Materials:

- iNetVu™ 1200/1800 Mobile Platform
- Universal Transmitter Mounting Bracket Kit
- BUC (Block Up Converter)
- Phillips Screwdriver
- Allen Key Set

### Procedure:

1. Ensure Block Up Converter (BUC) includes an o-ring.
2. Remove Universal Transmitter Mounting Brackets from the underside of the feed arm, if attached.

3. Place and secure the BUC on the underside of the Feed Arm as depicted in the figure below.

When securing the BUC, adjust the placement of the screws and brackets to ensure the following:

- a. The BUC is placed at the far right side of the Feed Arm (if facing the Reflector), using the holes on the far right side of the Feed Arm. This will ensure that the Flexible Waveguide does not bind or twist during Polarization Adjustments.
- b. A 1/4" space is left between the BUC and the Feed Arm Bar where the springs are attached. This will ensure you have enough space to attach the Flexible Waveguide to the BUC.
- c. The RG6 Coaxial Connector end of the BUC is facing the Reflector.
- d. The long screws of the Universal Transmitter Mounting Bracket Kit are fed through the grooves on each side of the BUC, if applicable.

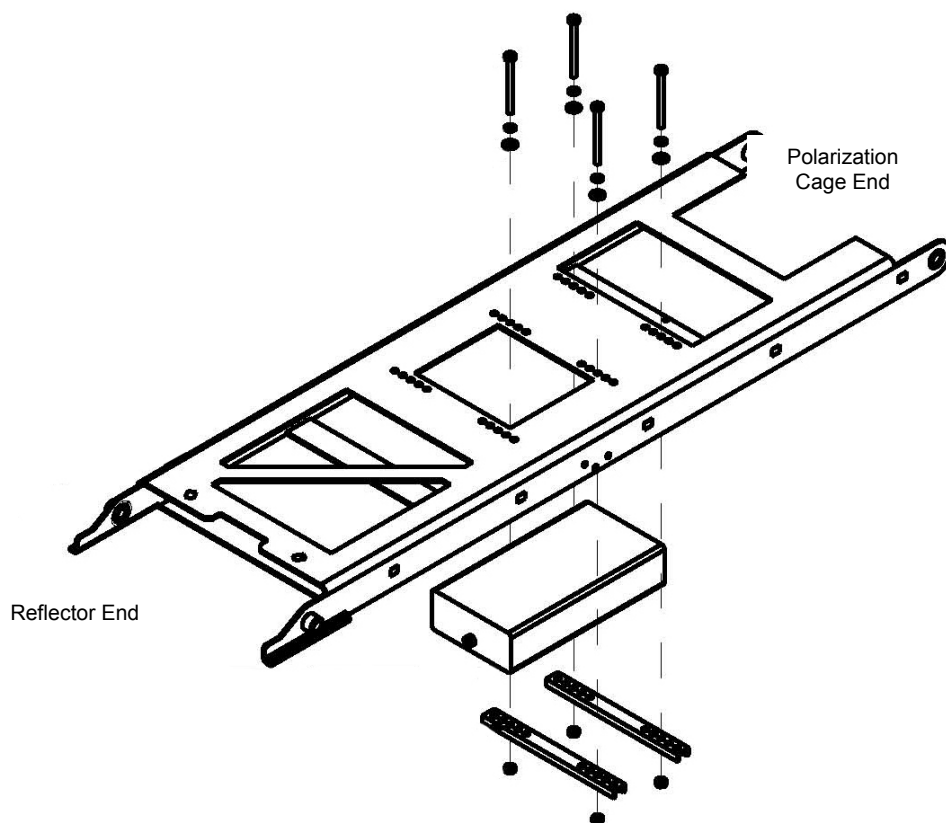


Fig. 44: Attaching BUC using Universal Transmitter Brackets



*Fig. 45: Correctly mounted and secured BUC with ¼" space between BUC and Feed Arm Bar*

4. Connect 'Tx' Coaxial cable to the BUC.
5. Connect the Flexible Waveguide to the BUC. Ensure that the Flexible Waveguide is on the right side of the springs (if facing the Reflector), as depicted in the figure below.



Flexible Waveguide  
attached on the correct  
side of the Polarization  
Cage springs.

*Fig. 46: Correct Position of the connected Flexible Waveguide*

8. Congratulations! The BUC has been successfully installed.

## 4.12. Adjusting Tx Pol for iNetVu™ 950 / 980 Mobile Platform

This procedure describes the steps involved in adjusting the Transmit Polarization for the iNetVu™ 950 / 980 Mobile System between Horizontal/Vertical Transmission.

### Required Materials for iNetVu™ 950 Mobile Platform:

- 2.5mm (3/32") Allen Key

### Procedure:

1. Raise the dish and ensure that Azimuth and Polarization are in stowed position.

**Note:** Included images do not have LNB attached. LNB **DOES NOT** need to be removed for this procedure.

2. Loosen transmitter bracket using a 2.5mm (3/32") Allen Key.



Fig. 47: Transmitter bracket screw location (left) and loosening the transmitter bracket (right)

3. Manually rotate transmitter bracket to the desired orientation by hand.

**Bracket Pointing UP: Vertical Transmit / Horizontal Receive**

**Bracket Pointing LEFT/RIGHT : Horizontal Transmission / Vertical Receive**

**Note:** Orienting the bracket to the LEFT or RIGHT are equivalent and does not affect operation.



*Fig. 48: Transmitter bracket orientation for Vertical Transmit*



*Fig. 49: Transmitter bracket orientation for Horizontal Transmit*

4. Ensure the transmitter bracket is level.
5. Tighten transmitter bracket.
6. Congratulations! The transmit polarization has been successfully adjusted.



**Required Materials for iNetVu™ 980 Mobile Platform:**

- 7/16" Wrench

**Procedure:**

1. Raise the dish and ensure that Azimuth and Polarization are in stowed position.

**Note:** LNB **DOES NOT** need to be removed for this procedure.

2. Loosen the two (2) bolts located on the Feed Horn Assembly using the 7/16" Wrench in order to allow the Feed Horn Assembly to be rotated.



*Fig. 50: Loosening the Feed Horn Assembly Bracket Cap*

3. Manually rotate transmitter bracket to the desired orientation by hand.

**Bracket Pointing UP: Vertical Transmit / Horizontal Receive**

**Bracket Pointing LEFT/RIGHT: Horizontal Transmission / Vertical Receive**



*Fig. 51: Transmitter bracket orientation for Vertical Transmit*



*Fig. 52: Transmitter bracket orientation for Horizontal Transmit*

4. Ensure the transmitter bracket is level.
5. Tighten transmitter bracket.

6. Congratulations! The transmit polarization has been successfully adjusted.

### 4.13. Attaching Feed Arm to iNetVu™ 950 / 980 Reflector

This procedure describes the steps involved for installing the Feed Arm to the 0.95m / 0.98m Reflector on an iNetVu™ 950 / 980 Mobile Platform.

#### Required Materials:

- 7/16" Wrench

#### Procedure:

1. Locate feed arm bracket on the reflector.
2. Thread the screw through the feed arm bracket and feed arm as shown in the figure below.



*Fig. 53: Feed arm attached to feed arm bracket*

3. Secure the feed arm by tightening the nut.
4. Congratulations! The feed arm has been successfully attached.

## 4.14. iNetVu™ Transportable Case Installation

### 4.14.1. 950 2-pc Transportable Case



#### Required Materials:

- iNetVu™ Mobile Platform Transportable Case
- 0.95m Reflector Transportable Case
- 7/16" (12mm) Wrench
- 1/2" (13mm) Wrench
- Ty-wraps

#### Procedure:

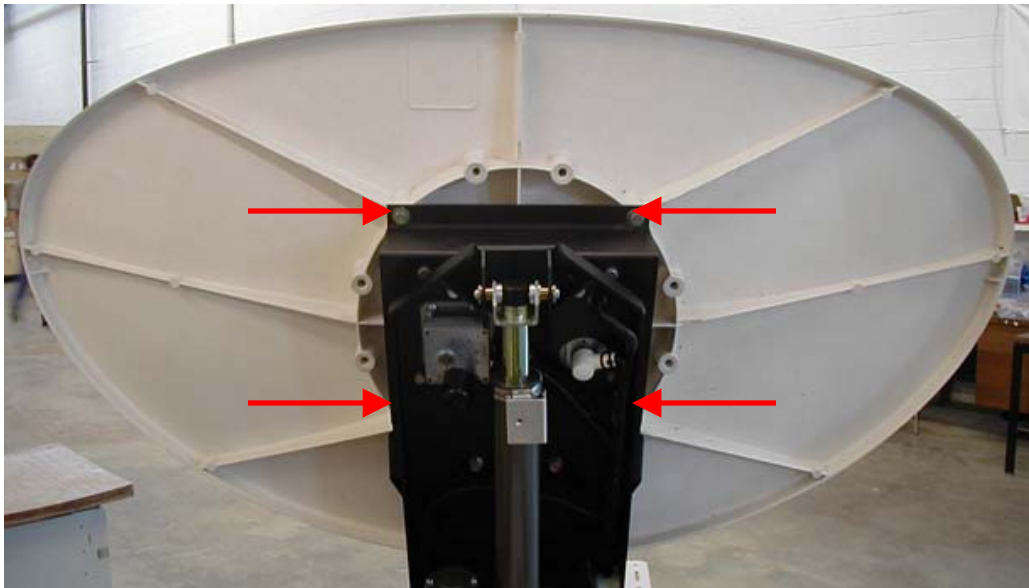
1. Remove iNetVu™ Mobile Platform Transportable Case cover and open the 0.95m Reflector Transportable Case.
2. Complete system wiring and connections for the iNetVu™ Mobile System according to the System Wiring Diagram for your Satellite Modem / Service.
3. Raise the Mobile Platform to approximately 35° in Elevation.

4. Remove Reflector and Feed Arm from Reflector Case.

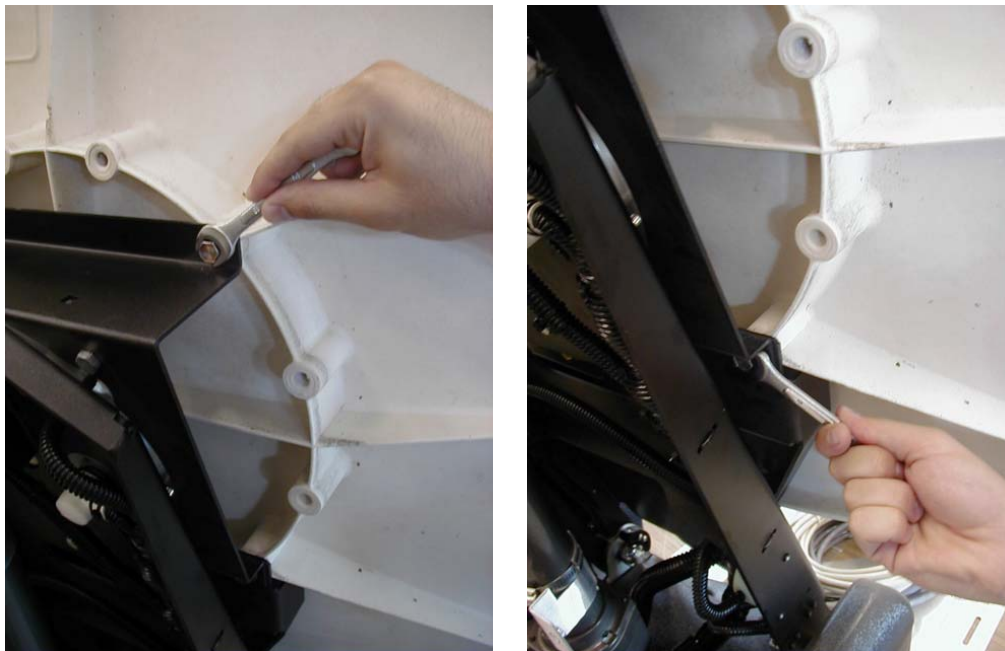


*Fig. 54: Reflector (left) and Feed Arm (right) inside the Reflector Transportable Case*

5. Remove the four (4) bolts from the back of the Reflector, locate the associated holes on the back of the Polarization Plate on the Mobile Platform and attach the Reflector using a  $\frac{1}{2}$ " (13mm) Wrench.



*Fig. 55: Reflector Mounting Locations*



*Fig. 56: Attaching Reflector Mounting Bolts*

6. Locate Feed Arm Bracket on Reflector and retrieve Feed Arm.



*Fig. 57: Feed Arm Bracket Location*



7. Thread the screw through the Feed Arm Bracket and Feed Arm as shown in the figure below.



*Fig. 58: Attaching Feed Arm to the Reflector*

8. Secure the Feed Arm by tightening the nut using a 7/16" (12mm) Wrench.
9. Connect "Tx" labeled RG6 Coaxial Cable from the Cable Bundle to the BUC.
10. Connect the "Compass" labeled cable from the Cable Bundle to the Compass attached to the Feed Horn Assembly.
11. Connect the "Rx" labeled RG6 Coaxial Cable from the Cable Bundle to the LNB.
12. Secure Cable Bundle to the Feed Arm using Ty-wraps. Ensure there is enough slack in the cable bundle to allow the Mobile Platform to rotate its Polarization a full  $\pm 70^\circ$ .



13. Congratulations! The iNetVu™ 950 has been successfully assembled.



*Fig. 59: Completed iNetVu™ 950 Mobile Platform*

#### 4.14.2. 950 1-pc Transportable Case



##### Required Materials:

- iNetVu™ Mobile Platform Transportable Case

##### Procedure:

1. Remove iNetVu™ Mobile Platform Transportable Case cover.



2. Complete system wiring and connections for the iNetVu™ Mobile System according to the System Wiring Diagram for your Satellite Modem / Service.
3. By hand, gently rotate the Reflector so that the Polarization is centered over the Base Plate.
4. Congratulations! The iNetVu™ 950 has been successfully assembled.

**Note:** When stowing the Mobile Platform, use the Automatic Controls. When the Antenna is in Stow Position, gently rotate the Reflector by hand in order to provide enough clearance for the Transportable Case's cover to be placed on.

#### 4.14.3. 1200 1-pc Transportable Case



##### Required Materials:

- iNetVu™ Mobile Platform Transportable Case

##### Procedure:

1. Remove iNetVu™ Mobile Platform Transportable Case cover.



2. Complete system wiring and connections for the iNetVu™ Mobile System according to the System Wiring Diagram for your Satellite Modem / Service.
3. Congratulations! The iNetVu™ 12000 has been successfully assembled.

#### **4.14.4. 1200 2-pc, 1-pc Reflector Transportable Case**



#### **Required Materials:**

- iNetVu™ Mobile Platform Transportable Case
- iNetVu™ 1.2m Reflector Transportable Case
- 2 Ball Joint Gas-shock Springs (Attached to iNetVu™ Mobile Platform)
- Reflector Assembly Hardware Bag
- Phillips Screwdriver
- 10mm (3/8") Wrench
- 13mm (1/2") Wrench
- Handheld Controller (Optional)

#### **Procedure:**

1. Remove cover from the iNetVu™ Mobile Platform Transportable Case.



2. Raise the Mobile Platform to approximately 35° using the iNetVu™ Mobile Software or the Handheld Controller. For more information regarding the use of the iNetVu™ Mobile Software and its installation, please refer to the iNetVu™ System Manual.
3. Remove Reflector from the iNetVu™ Reflector Transportable Case.
4. Install Reflector as described in Appendix 2.
5. Congratulations! The iNetVu™ 12000 has been successfully assembled.



6. Completed iNetVu™ 1200 Mobile Platform

#### 4.15. Installing Flexible Waveguide onto A980 Mobile Platform

This procedure describes the steps involved for installing the flexible waveguide from the feed horn to the BUC on an A980 Mobile Platform.

**Caution:**

Incorrect installation causes abrasion of the rubber waveguide while stowed, and forces the waveguide to too tight a bend.



***Incorrect Installation***

**Procedure:**

1. Connect the flexible waveguide to the OMT-TRF using the appropriate Allen Key. Ensure the groove of the waveguide aligns with the groove of the OMT.



2. The waveguide should extend outwards from the OMT and loop UPWARDS then back within the side waveguide support (J-clip under the Feedarm Roll Bar). The waveguide should travel straight towards the connector flange on the BUC. Ensure the flex bend diameter is a minimum of 6 inches.



3. Connect the waveguide to the BUC using the appropriate machine screws. Ensure the groove of the waveguide aligns with the groove of the BUC.





4. Congratulations! The flexible waveguide has been successfully attached.



## Appendix A – Default Speeds/Offsets/Current Limits (5000/9000 Controller)

### Default Compass Values

	PLATFORM TYPES						
	MF1200	ME1200	A1200B/ A1200C	A0980B	MF950	ME950	A0950B
COMPASS READING ELEVATION	35	32	32	35	37	35	35

	PLATFORM TYPES				
	MF740	ME740	A0740B	A1800A/ B/C/D	A0660A
COMPASS READING ELEVATION	40	40	40	32	24.5

### Default Elevation Offset

	PLATFORM TYPES						
	MF1200	ME1200	A1200B/ A1200C	A0980B	MF950	ME950	A0950B
EL OFFSET	42.00	42.00	42.00	31.00	25.00	31.00	31.00

	PLATFORM TYPES				
	MF740	ME740	A0740B	A1800A/ B/C/D	A0660A
EL OFFSET	25.40	31.00	31.00	46.5	55.00

### Azimuth – Default POT Factors

	PLATFORM TYPES						
	MF1200	ME1200	A1200B/ A1200C	A0980B	MF950	ME950	A0950B
AZ POT ZERO	376.14	286.1878	286.1878	343.0747	226.0722	343.0747	343.0747
AZ POT FACTOR	0.737	0.5525	0.5525	0.6683	0.4515	0.6683	0.6683

	PLATFORM TYPES				
	MF740	ME740	A0740B	A1800A/ B/C/D	A0660A
AZ POT ZERO	226.0722	343.0747	343.0747	280.7808	343.0747
AZ POT FACTOR	0.4515	0.6683	0.6683	0.5484	0.6683

### Polarization – Default POT Factors

	PLATFORM TYPES						
	MF1200	ME1200	A1200B/ A1200C	A0980B	MF950	ME950	A0950B
PL POT ZERO	250.2905	203.066	203.066	128.5094	80.2096	128.5094	128.5094
PL POT FACTOR	0.5304	0.3852	0.3852	0.2574	0.1586	0.2574	0.2574

	PLATFORM TYPES				
	MF740	ME740	A0740B	A1800A/ B/C/D	A0660A
PL POT ZERO	80.2096	128.5094	128.5094	205.4144	128.5094
PL POT FACTOR	0.1586	0.2574	0.2574	0.4012	0.2574

### Default Speeds and Current Limits

	PLATFORM TYPES						
	MF1200	ME1200	A1200B/ A1200C	A0980B	MF950	ME950	A0950B
EL FAST	9	9	9	9	9	9	9
EL SLOW	7	5	4	4	5	4	4
EL CALIBRATE	7	7	7	7	7	7	7
EL CURRENT3	1.60	1.60	1.60	1.60	1.60	1.60	1.60
EL CURRENT6	5.00	5.00	5.00	5.00	5.00	5.00	5.00
EL CURRENT9	12.50	12.50	12.50	12.50	12.50	12.50	12.50
AZ FAST	9	9	9	8	8	8	8
AZ SLOW	6	5	7	6	5	4	4
AZ CALIBRATE	7	7	7	7	7	7	7
AZ CURRENT3	1.30	1.80	1.80	1.80	1.30	1.80	1.80
AZ CURRENT6	3.50	4.50	7.00	4.50	3.50	4.50	4.50
AZ CURRENT9	6.00	8.00	8.00	8.00	6.00	8.00	8.00
PL FAST	9	9	9	9	9	9	9
PL SLOW	4	4	4	7	7	7	7
PL CALIBRATE	7	7	7	7	7	7	7
PL CURRENT3	0.40	0.40	0.40	0.40	0.40	0.40	0.40
PL CURRENT6	1.20	1.20	1.20	1.20	1.20	1.20	1.20
PL CURRENT9	1.50	1.50	1.50	1.50	1.50	1.50	1.50

	PLATFORM TYPES				
	MF740	ME740	A0740B	A1800A/ B/C/D	A0660A
EL FAST	9	9	9	9	9
EL SLOW	4	4	4	7	4
EL CALIBRATE	7	7	7	7	7
EL CURRENT3	1.60	1.60	1.60	1.60	1.60
EL CURRENT6	5.00	5.00	5.00	5.00	5.00
EL CURRENT9	12.50	12.50	12.50	12.50	12.50
AZ FAST	8	8	8	9	8
AZ SLOW	4	4	4	6	4
AZ CALIBRATE	7	7	7	7	7
AZ CURRENT3	1.30	1.80	1.80	1.80	1.80
AZ CURRENT6	3.50	4.50	4.50	5.50	4.50
AZ CURRENT9	6.00	8.00	8.00	9.00	8.0
PL FAST	9	9	9	9	9
PL SLOW	7	7	7	4	7
PL CALIBRATE	7	7	7	7	7
PL CURRENT3	0.40	0.40	0.40	0.40	0.40
PL CURRENT6	1.20	1.20	1.20	1.20	1.20
PL CURRENT9	1.50	1.50	1.50	1.50	1.50

## Appendix B – Default Speeds/Offsets/Current Limits (7000 Controller)

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### Compass Reading Elevation

	PLATFORM TYPES				
	A1800A/ B/C/D	A1200C	A0980B	A0740B	A0660A
COMPASS READING ELEVATION	32	32	35	25	25

### Elevation Offset

	PLATFORM TYPES				
	A1800A/ B/C/D	A1200C	A0980B	A0740B	A0660A
EL OFFSET	45.00	42.00	31.00	31.00	35.00

### AZ Potentiometer

	PLATFORM TYPES				
	A1800A/ B/C/D	A1200C	A0980B	A0740B	A0660A
AZ POT ZERO	280.7808	282.88	342.17	342.17	342.17
AZ POT FACTOR	0.5484	0.5525	0.6683	0.6683	0.6683

### PL Potentiometer

	PLATFORM TYPES				
	A1800A/ B/C/D	A1200C	A0980B	A0740B	A0660A
PL POT ZERO	205.4144	197.22	131.79	131.79	131.79
PL POT FACTOR	0.4012	0.3852	0.2574	0.2574	0.2574

## Default Platform Speeds and Limits

	PLATFORM TYPES				
	A1800A/ B	A1200C	A0980B	A0740B	A0660A
EL SLOW	6	6	4	4	4
EL CURRENT6	7.00	7.00	7.00	7.00	7.00
EL CURRENT9	12.00	12.00	12.00	12.00	12.00
AZ SLOW	6	6	4	4	4
AZ CURRENT6	7.00	7.00	7.00	7.00	7.00
AZ CURRENT9	12.00	12.00	12.00	12.00	12.00
PL SLOW	6	6	7	7	7
PL CURRENT6	1.0	1.0	1.0	1.0	1.0
PL CURRENT9	2.0	2.0	2.0	2.0	2.0

## Appendix C: Maintenance Chart

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Date Performed:

TASK		PROCEDURE	Notes
<input type="checkbox"/>	CLEAN PLATFORM CONNECTORS	2.2.3	
<input type="checkbox"/>	SPRAY ON LITHIUM GREASE TO JOINTS APPLIED	2.2.4	
<input type="checkbox"/>	GREASE POLARIZATION GEAR ASSEMBLY	2.2.5	
<input type="checkbox"/>	GREASE AZIMUTH GEAR ASSEMBLY	2.2.6	
<input type="checkbox"/>	EMERGENCY STOP SWITCH OPERATION CHECK (IF APPLICABLE)	2.2.7	
<input type="checkbox"/>	CLEANING 980 / 1200 REAR ANTENNA COVER	2.2.8	